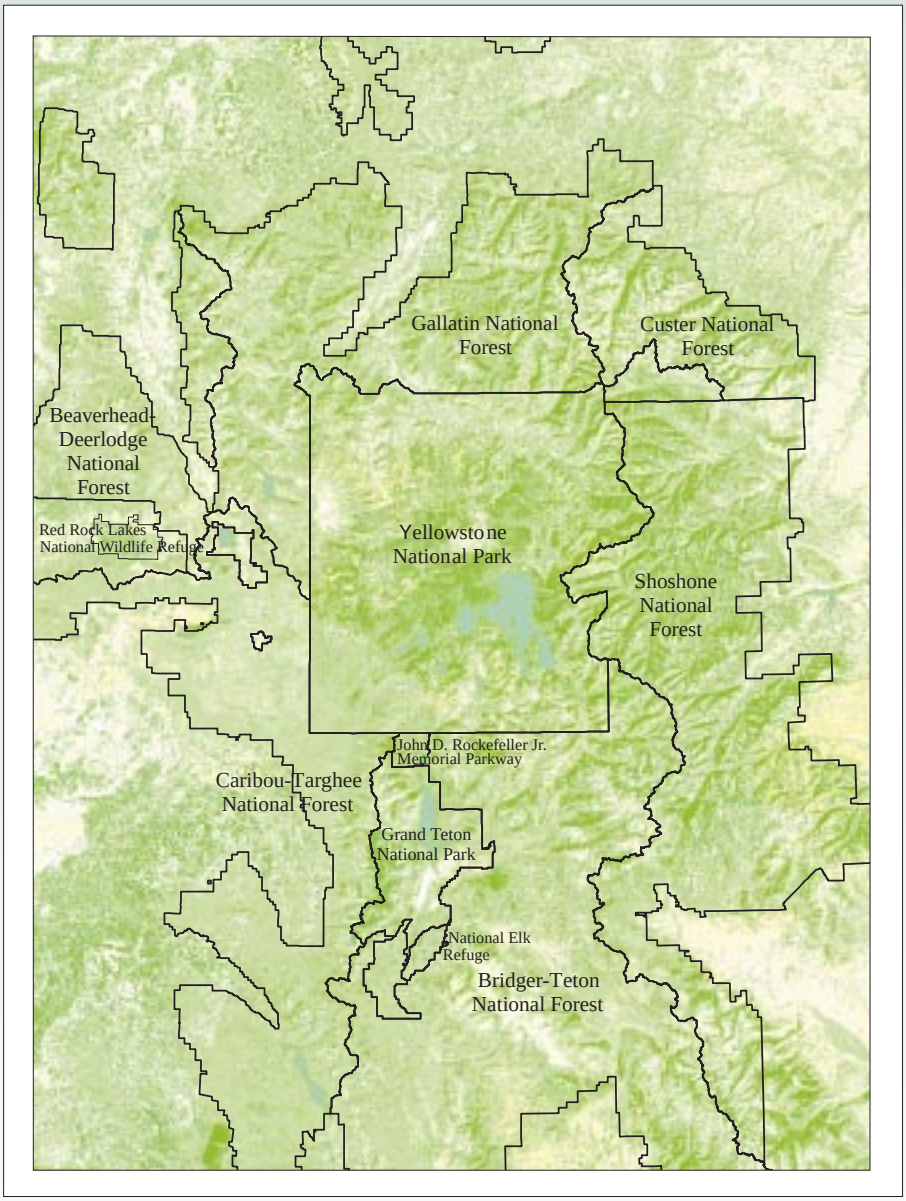
Federal Land Managers
in the Greater Yellowstone Area

Greater Yellowstone Coordinating Committee



Briefing Guide

June 2001

Photos courtesy of the National Park Service, Forest Service, and
U.S. Fish and Wildlife Service.

Suggested citation: Greater Yellowstone Coordinating Committee. 2001.
Greater Yellowstone Coordinating Committee Briefing Guide.
Greater Yellowstone Coordinating Committee, Billings, Montana.

Greater Yellowstone Coordinating Committee Briefing Guide

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June 2001

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Welcome to the Greater Yellowstone Area and the Greater Yellowstone Coordinating Committee

"Transcending Boundaries in One of America's Most Treasured Ecosystems"

The Greater Yellowstone Area (GYA) is comprised of two national parks, parts of six national forests, two national wildlife refuges, and other federal, state, and private lands. As most of the area lies within the public domain and includes some of the nation's most treasured natural resources, land management agencies have historically coordinated their planning and management.

Who is the GYCC?

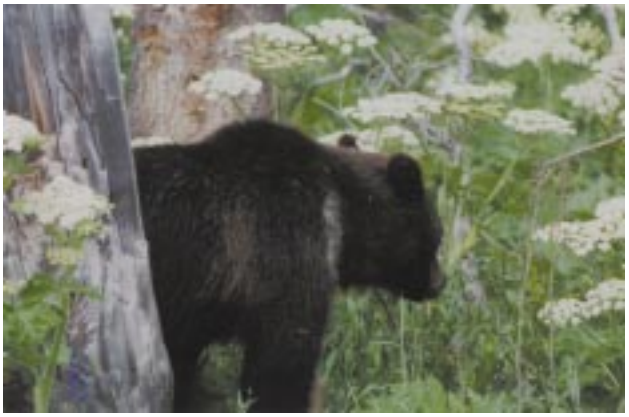
The Greater Yellowstone Coordinating Committee (GYCC) was formed in 1964 when the National Park Service and the U.S. Forest Service signed a formal Memorandum of Understanding (MOU). The MOU provides for mutual cooperation and coordination in the management of core federal lands in the GYA.

In response to Congressional hearings held in the fall of 1985 concerning coordinated management in the GYA, the MOU was revised in 1986.

The committee consists of:

- The Regional Director of the Intermountain Region of the National Park Service and the Regional Forester from the Rocky Mountain Region, U.S. Forest Service;
- Park Superintendents from Yellowstone and Grand Teton National Parks;
- Forest Supervisors from the Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer, Gallatin, and Shoshone National Forests;
- Refuge manager from the National Elk Refuge (also represents the interests of Red Rock Lakes refuge).

Jerry Reese, Supervisor of the Caribou-Targhee National Forest, serves as the current committee chair. The chair rotates every two years. In March of 2000, Larry Timchak was hired as executive coordinator for GYCC. Larry, an employee of Yellowstone National Park, is stationed at the Custer National Forest office in Billings, Montana.



Grizzly bear.

What is the role of the GYCC?

The GYA is a unique and special place. Federal lands in the GYA, administered by six national forests, two national parks, and two national wildlife refuges, are geographically contiguous, ecologically interdependent, and unalterably linked.

Members of the GYCC recognize their responsibility to cooperatively manage GYA resources to sustain existing values and characteristics, consistent with the missions of the agencies.

The role of the GYCC is to provide leadership, guidance, and coordination for the national parks, national forests, and national wildlife refuges in the GYA. Goals for the GYCC include:

- Provide leadership in making coordinated decisions that serve the public and help sustain the resources. Ensure coordination of planning, strategies, and practices across national park, national forests, and national wildlife refuge units.
- Set GYCC level priorities and assign resources to achieve objectives.
- Provide a forum for interaction with federal, state, local agencies, private organizations, and the public. Help foster a climate that encourages coordination and sharing.
- Identify and provide for resolution of emerging issues within the GYA.
- Minimize duplication of effort; seek opportunities to share information, resources, and data.
- To the extent permissible by law and agency missions, make rules and regulations consistent across the GYA.

Unit Descriptions

The GYA includes the following national forests, parks, and wildlife refuges:

Yellowstone National Park

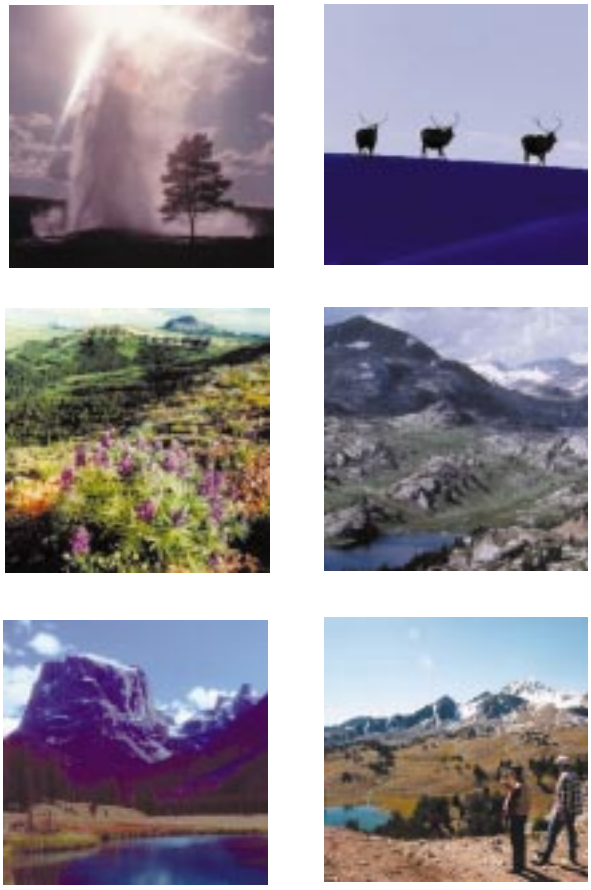
Preserved within Yellowstone National Park are Old Faithful and the majority of the world's geysers and hot springs. America's first national park is an outstanding mountain wildland with clean air and water, and is home to grizzly bears, wolves, and free-ranging herds of bison and elk.

Grand Teton National Park

Grand Teton National Park offers a legacy of grand proportions combining worldwide recognition for spectacular scenery, bountiful wildlife, and abundant recreation opportunities. Soaring above the valley floor, the Teton Range provides a stunning backdrop for Grand Teton National Park.

John D. Rockefeller Jr. Memorial Parkway

Linking West Thumb in Yellowstone with the South Entrance of Grand Teton National Park, this scenic 82-mile corridor commemorates Rockefeller's role in aiding establishment of many parks, including Grand Teton. The parkway was authorized August 25, 1972.



Scenes from the Greater Yellowstone Area.

Shoshone National Forest

The rugged eastern flank of the ecosystem is guarded by the 2.4 million acre Shoshone National Forest, the nation's first national forest. Rich with history and breathtaking scenery, the Shoshone remains largely wild and undeveloped. Wilderness areas including the Washakie, North Absaroka, Fitzpatrick, Popo Agie, and Absaroka-Beartooth encompass nearly 1.4 million acres.

Bridger-Teton National Forest

Rounding out the southern part of the ecosystem with its 3.4 million acres, the Bridger-Teton National Forest is the second largest national forest outside Alaska. Included are more than 1.2 million acres of wilderness in the Bridger, Gros Ventre, and Teton Wildernesses. The Bridger-Teton is a land of varied recreational opportunities, beautiful vistas, and abundant wildlife.

Caribou-Targhee National Forest

The western neighbor to Yellowstone and Grand Teton National Parks, the Caribou-Targhee National Forest is home to a diverse number of wildlife and fish, including threatened and endangered species, wilderness, scenic panoramas, and intensively managed forest lands. The Targhee National Forest is named in honor of a Bannock Indian warrior.

Gallatin National Forest

The northern crown of the ecosystem, the Gallatin National Forest includes noted mountain ranges such as the Absaroka-Beartooths, Madison, Gallatins, Bridgers and Crazies—birthplace to many of Montana's blue ribbon streams. The Gallatin is a haven for both wildlife and recreationists, providing for more recreation than any other forest in the northern region.

Custer National Forest

Visitors entering the ecosystem from the northeast experience the breathtaking Beartooth Highway, and the Beartooth plateau, the largest expanse of alpine tundra in the lower 48 states. Dotted with lakes and crossed by hiking trails, the Beartooth plateau is a recreational wonderland.




Scenes from the Greater Yellowstone Area.

Beaverhead-Deerlodge National Forest

An inviting forest noted for excellent hunting and fishing, the Beaverhead-Deerlodge offers diverse recreation opportunities in the dozen distinct mountain ranges that span this forest. Within the GYA, the Madison Ranger District includes the Madison, Centennial, Gravelly, and Tobacco Root Mountain Ranges.

National Elk Refuge

Created in 1912 as a result of public interest in the survival of the Jackson Hole elk herd, the National Elk Refuge continues to preserve the last of the elk winter range in the valley. The refuge is managed to provide a winter home for an average of 7,500 elk, over half of the Jackson Hole population, and provides valuable open space in the Jackson Hole area.

Red Rock Lakes National Wildlife Refuge

Red Rock Lakes National Wildlife Refuge was established in 1935 to protect the rare trumpeter swan. Today, the refuge continues to be one of the most important habitats in North America for these majestic birds. Originally homesteaded, much of the area has been restored to its natural state, leading to designation as a National Natural Landmark, as well as becoming one of the few marshland wilderness areas in the country.

Greater Yellowstone Coordinating Committee

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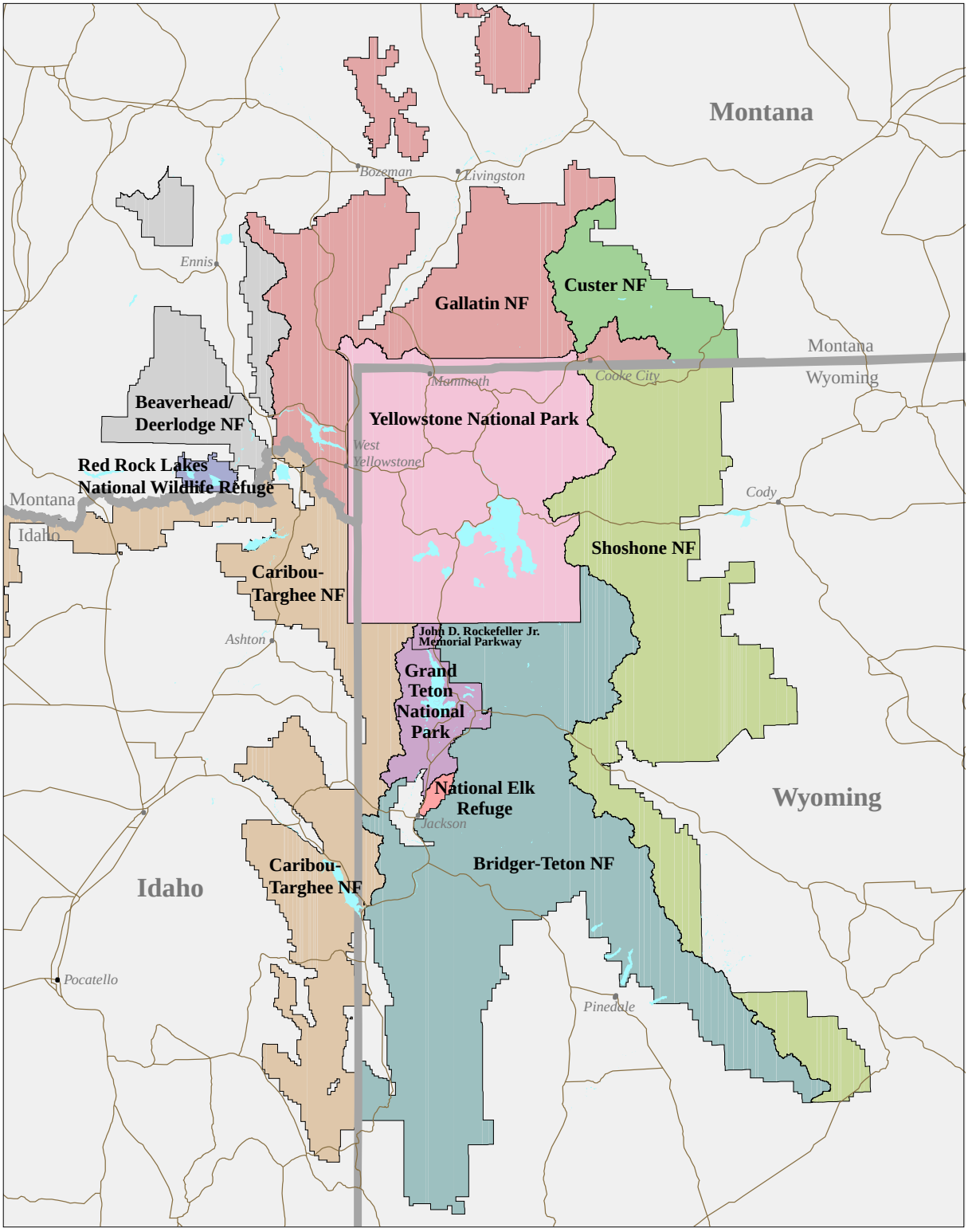
Greater Yellowstone Area: Administrative Units



Agency Mission Statements

Complexities of managing a vast area spanning 3 states and 19 counties, administered by 10 different units from 3 agencies can be daunting. The complexity is further compounded because these lands include some of the nation's most treasured natural resources. The GYCC works together to help sustain a healthy and productive ecosystem that meets the needs of present and future generations, consistent with agency missions and unit plans.

Agencies share much in common in terms of broad goals, and operate under several important comprehensive laws such as the Endangered Species Act, the Clean Water Act, the Wilderness Act, and the National Environmental Policy Act. By their nature, these acts help ensure that agencies coordinate across boundaries.

However, it's also important to note that each agency has distinct laws and regulations, missions, and cultures. It's important to understand the distinctions because they help shape managers' decisions.

Department of the Interior National Park Service

"Experience Your America"

The National Park Service (NPS) manages over 380 units located in nearly every state and territory of the nation. The NPS is a field based resource preservation and visitor service organization. The NPS preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The NPS cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world. Website: http://www.nps.gov/

Department of the Interior U. S. Fish and Wildlife Service

"Conserving the Nature of America"

The Service has the privilege of being the primary federal agency responsible for the protection, conservation, and renewal of fish and wildlife and their habitats for this and future generations. However, it must be clearly recognized that because fish and wildlife resources know no boundaries nor land ownership patterns, the conservation of those resources can only be accomplished through partnership efforts with other federal agencies, state and local governments, tribal governments, international and private organizations, and individuals.

Aspen.

The Service manages nearly 94 million acres across the United States, encompassing a network of 514 refuges of the National Wildlife Refuge System (NWRS) and 65 National Fish Hatcheries (NFHS). The National Wildlife Refuge System, the National Fish Hatchery System, along with the fish, wildlife, and plants that these systems protect and conserve, enrich people in a great variety of ways. Website: http://www.fws.gov/

Department of Agriculture U.S. Forest Service

"Caring for the Land and Serving People"

The U.S. Forest Service mission is to sustain the health, productivity, and diversity of the land to meet the needs of present and future generations. Conserving and restoring the health of the land is the principle underlying every Forest Service program. Healthy land is fundamental to human well-being and to providing a sustainable flow of goods and services. This approach to management, where goods and services are provided within the capability of the resource base is referred to as an "ecosystem approach" to land and water management, or ecosystem management.

Ecosystem management considers ecological, economic, and social factors in determining how to best maintain and enhance the quality of the environment to meet current and future needs for recreation, water, timber, minerals, range, fish, wildlife and wilderness on national forest lands.

The National Forest System consists of 192 million acres in 42 states, Puerto Rico, and the Virgin Islands. Website: http://www.fs.fed.us.

Status of GYCC Committees

Various committees are responsible for the on-going coordination of management activities in the Greater Yellowstone Area (GYA). A brief summary of GYCC related committees follows:

GYA Clean Air Partnership. The committee consists of unit air resource program managers as well as the Departments of Environmental Quality in Idaho, Montana, and Wyoming, and the Idaho National Engineering and Environmental Laboratory. The committee serves as a technical advisory group on air quality issues to the GYCC, as a forum for communicating air quality information and regulatory issues, and coordinates monitoring between state and federal agencies.

Key contact: Mark Story, Gallatin National Forest.

GYA Fire Management Team. Fire management officers from each GYCC unit meet each spring and fall to review fire management planning status and operational procedures. GYA fire managers provide peer review of individual unit fire management plans, and develop procedures for coordinated management of large and or complex fire incidents within the GYA.

Key contact: Dave Sisk, Shoshone National Forest.

GYA Science Group. The group helps identify priority research needs and coordinates research projects across the GYA. Develops and analyzes scientific information to provide a scientific basis for the management of natural and cultural resources in the GYA.

Key contact: Currently inactive.

GYA Weed Group. Invasive species coordinators from each unit work together on common inventories, establishment of cooperative weed management areas, and integrated management to prevent the spread of noxious weeds.

Key contact: Craig McClure, Yellowstone National Park.

GYA Hydrologist Team. The team works on a GYA-wide assessment of watershed conditions, restoration priorities, monitoring, and cooperative management opportunities.

Key contact: Mark Story, Gallatin National Forest.

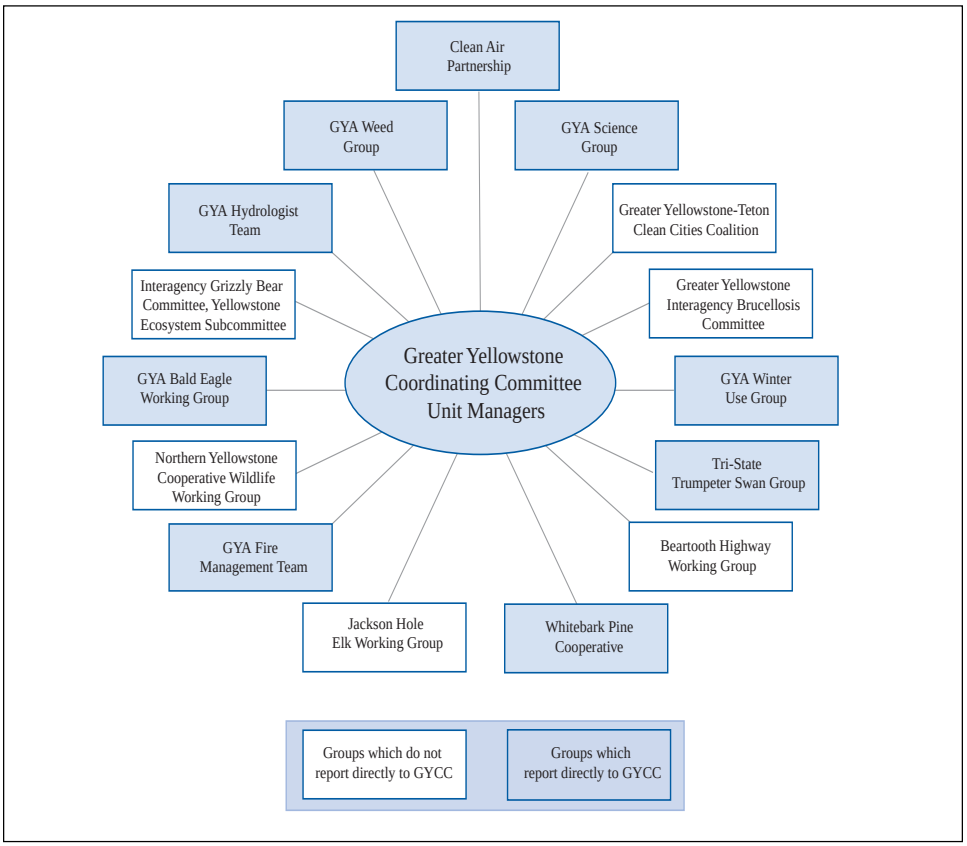
Whitebark Pine Cooperative. Partners include forests and parks in the GYA, Wyoming Game and Fish, Forest Service Research, USGS Interagency Grizzly Bear Study Team, Forest Service tree nurseries, and the Wyoming State Forestry Division. Partners are working to maintain and restore whitebark pine stands threatened by white pine blister rust.

Key contact: Melissa Jenkins, Caribou-Targhee National Forest.

Tri-State Trumpeter Swan Group. State fish and wildlife departments for Idaho, Montana and Wyoming, U.S. Fish and Wildlife Service, and other federal land managers in the GYA are working to maintain and restore trumpeter swan populations and habitat.

Key contact: Bob Oakleaf, Wyoming Game and Fish.

Northern Yellowstone Cooperative Wildlife Working Group. Biologists from Yellowstone National Park, Gall-



Yellowstone cutthroat trout inventories, Caribou-Targhee National Forest.

atin National Forest, USGS Biological Resource Division, and Montana Fish, Wildlife and Parks are working together on issues concerning management of the northern elk herd and other ungulates.

Key contact: Tom Lemke, Montana Fish, Wildlife and Parks.

Jackson Hole Elk Working Group. The National Elk Refuge, Grand Teton National Park, Bridger-Teton National Forest, and Wyoming Game and Fish deal with issues primarily related to elk and bison winter range management.

Key contact: Barry Reiswig, National Elk Refuge.

Greater Yellowstone Bald Eagle Working Group. Biologists from Yellowstone National Park, U.S. Fish and Wildlife Service, and the states of Wyoming, Montana, and Idaho coordinate the recovery of the bald eagle.

Key contact: Terry McEneaney, Yellowstone National Park.

Yellowstone Ecosystem Subcommittee (YES). A subcommittee of the Interagency Grizzly Bear Committee, consisting of representatives from the U.S. Fish and Wildlife Service, Idaho, Montana, and Wyoming wildlife departments, Forest Service, and the National Park Service. Focus is on coordinated grizzly bear management, including recovery planning.

Key contact: Reg Rothwell, Wyoming Game and Fish.

Greater Yellowstone Interagency Brucellosis Committee (GYIBC). Chartered by the Secretaries of Interior and Agriculture and the governors of Idaho, Montana, and Wyoming, the goal of the GYIBC is to protect and sustain the free-ranging elk and bison populations in the GYA and protect the public interest and economic viability of the livestock industry in the states of Idaho, Montana, and Wyoming. The committee meets three times a year.

Key contact: Bob Hillman, State of Idaho.

Greater Yellowstone Winter Use Group. A group of representatives from forests and parks that work together on winter use issues. Current priority is monitoring impacts of winter use.

Key contact: Larry Timchak, Executive Coordinator.

Greater Yellowstone-Teton Clean Cities Coalition. A regionally based group of public and private sector interests located in Yellowstone and Grand Teton National Parks and surrounding national forests gateway communities in Idaho, Montana, and Wyoming. The primary goal is to address energy efficiency and the use of alternative, cleaner fuels.

Key contact: John Lear, Idaho National Engineering and Environmental Laboratory.

Beartooth Highway Working Group. Representatives from Yellowstone National Park; Custer, Gallatin, and Shoshone National Forests; Montana and Wyoming Transportation Departments; and Federal Highways are working on jurisdictional issues and long-term maintenance and improvement plans for the Beartooth Highway.

Key contact: Federal Highway Administration.

Major Planning Projects Around the Greater Yellowstone Area

National parks, wildlife refuges, and national forests are engaged in various National Environmental Policy Act (NEPA) planning efforts. For national forests, NEPA quarterly reports listing all on-going projects can be accessed via the internet addresses listed below. For national parks, projects are included in the list of recent press releases. National wildlife refuge homepages may provide project information.

Bridger-Teton National Forest
www.fs.fed.us/btnf/nepalist.htm
Beaverhead-Deerlodge National Forest
www.fs.fed.us/r1/bdnf/ (reading room)
Caribou-Targhee National Forest
www.fs.fed.us/tnf
Custer National Forest
www.fs.fed.us/r1/custer
Gallatin National Forest
www.fs.fed.us/r1/gallatin/projects
Shoshone National Forest
www.fs.fed.us/r2/shoshone/nepa/projectinfo.htm
Yellowstone National Park
www.nps.gov/yell/press/index.htm
Grand Teton National Park
www.nps.gov/grte/
National Elk Refuge
www.r6.fws.gov/nationalelkrefuge/
Red Rock Lakes Refuge
www.r6.fws.gov/redrocks

Where we have been…

There are many milestones for the Greater Yellowstone Coordinating Committee since its inception in 1964. A brief summary of major accomplishments follows:

1964

• Greater Yellowstone Coordinating Committee formed with signing of a Memorandum of Understanding between the National Park Service and Forest Service.

1979

• GYCC issues "Guidelines for Management Involving Grizzly Bears in the Greater Yellowstone Area."

1983

• The *Bald Eagle Management Plan* released, covering five GYCC units.

1985

• Joint hearings held by House Subcommittee on Public Lands and National Parks and Recreation about coordinated management in the GYA.

• A joint Forest Service/Park Service planning team established in Billings to create an information base from existing planning documents.

1986

• Memorandum of Understanding between Park Service and Forest Service revised to reinforce existing mutual cooperation and coordination in response to congressional hearings.

1987

• *Greater Yellowstone Area Aggregation of National Parks and National Forest Management Plans* released. The report compiles and summarizes existing management plans for the national parks and forests within the GYA.

1988

• "Greater Yellowstone Area Interagency Fire Planning and Coordination Guide" completed.

1989

• "The Greater Yellowstone Postfire Assessment," a collection and evaluation of postfire data compiled by 15 interagency teams is published.

1990

• Draft "Vision for the Future" document released for public comment. The Vision document describes a desired future condition for the GYA.

1991

• GYCC issues a "Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area." The Framework, a final version of the 1990 Vision document, includes guidelines and principles for coordinated management of the GYA.

1992

• "Guidelines for Coordinated Management of Noxious Weeds" released. The document served as a model for coordinated and integrated noxious weed management.

• National Forests issue GYA Outfitter Policy to provide consistent direction for the administration of outfitter guides.

1993

• Units of the coordinating committee issue wilderness fire management plans for wilderness and backcountry areas.

• National Forests issue special orders on the use of weed-free feed to reduce the spread of noxious weeds.

1994

• National Forests issue uniform regulations on wilderness and non-wilderness recreation use.

• GYCC forms Winter Use Management Work Group to analyze current winter use patterns and areas of conflict.

1996

• GYCC funds provided for completion of the grizzly bear cumulative effects model.

1999

• *Winter Visitor Use Management: A Multi-agency Assessment*, completed.

• "Greater Yellowstone Area Air Quality Assessment" document released.

• *Effects of Winter Recreation on Wildlife of the Greater Yellowstone Area: A Literature Review and Assessment*, published.

GYCC at Work

On an annual basis, dependent upon the availability of funds, the GYCC supports projects that help further the goals and priorities of the GYCC. Projects are selected based on how well they address priorities, whether they provide benefits across the ecosystem rather than to just one unit, and how well they leverage additional funds through partnerships.

In 2000, the GYCC funded 30 projects that focused heavily on invasive species, cutthroat trout, whitebark pine conservation, improving land patterns, recreation, and wildlife. Sixty partners contributed nearly $300,000 toward these projects. Thirteen projects facilitated internal partnerships between GYCC units.

For 2001, the GYCC provided continued funding for 8 projects started in 2000, and funded 26 new projects. Projects for both years are briefly summarized below.

Noxious Weed Management

Coordinated Noxious Weed Control Efforts

Unit	Project	Description	Partnerships
Beaverhead-Deerlodge NF	Madison Ranger District Backcountry Weed Management	Backcountry weed inventory, control, prevention, and education primarily in the Gravelly Mountains.	Rocky Mountain Elk Foundation; Madison Valley Ranchland Group; Madison County Weed Board
Bridger-Teton NF	Integrated Noxious Weed Control	Working with partners to control 150 acres of noxious weeds.	Habitat Trust Fund; Wyoming Game and Fish; Rocky Mountain Elk Foundation; Jackson Hole Weed Management Area
Bridger-Teton NF	Purge Spurge	Eradicate leafy spurge along riparian areas in the Salt River Range of the Star Valley front.	Highlands Cooperative Weed Management Area; Lincoln County
Custer NF	Rock Creek/Beartooth Highway Noxious Weed Project	Control spotted knapweed and leafy spurge that is expanding beyond the Beartooth Highway right-of-way.	Montana Dept. Fish Wildlife and Parks; Rock Creek Resort; City of Red Lodge; Carbon County Weed District; 400 Ranch; Rocky Creek Ranch
Caribou-Targhee NF	Black Canyon/Dry Canyon Leafy Spurge Control Program	Control spurge with sheep grazing and flea beetles on 2,500 acre infestation of spurge; monitor effectiveness.	Utah/Idaho Weed Management Area; Jeffe Roche L&L Co.; Dry Canyon Cattlemen's Association; Sterling Bingham
Grand Teton NP National Elk Refuge, Bridger-Teton NF	Gros Ventre River Corridor Spotted Knapweed Project	Continue project initiated last year to control knapweed seed sources located on major elk migration routes; expand control efforts to less accessible places.	Teton Weed and Pest; Jackson Hole Weed Management Area
Cooperative Weed Management Areas (WMA), Education and Awareness			
Gallatin NF	Upper Gallatin Invasive Species Project	Formally establish Upper Gallatin WMA. Expand education, awareness and control efforts.	Gallatin County Weed District; Montana Dept. of Fish, Wildlife and Parks; Big Sky Institute
Gallatin NF	Upper Yellowstone Weed Management Area	Establish a WMA for the Upper Yellowstone watershed.	Park County; BLM; Montana Dept. Fish, Wildlife and Parks; Yellowstone NP
Grand Teton NP	Student Conservation Association (SCA) Position for Noxious Weed Education Campaign	Fund 1 student conservation associate for 6 months to work with Jackson Hole Weed Management Area on weed awareness.	Teton County Weed & Pest; Student Conservation Association
GYCC All units	GYCC Weed Awareness Tools	Prepare internal awareness and training tools including power point presentations and GYCC Pocket Guide.	Center for Invasive Plant Mgmt.; MSU; Montana Weed Control Education Committee; Cooperative Ecosystems Study Unit

Inventory and Mapping Projects

Unit	Project	Description	Partnerships
Beaverhead-Deerlodge NF	Madison Valley Weed Inventory Project	Develop a comprehensive weed inventory for all lands. Expand upper Madison WMA to include entire valley.	Madison County Ranchland Group; Madison County Weed Board; BLM
Caribou-Targhee NF	Pallisades Wilderness Study Area Monitoring and Noxious Weed Control	Control noxious weed infestations discovered last year. Inventory trails to relocate out of riparian areas. Monitor recreation and grazing use.	Upper Snake Weed Management; Area Bureau of Reclamation; Back Country Horsemen; Palisades Mitigation project; Palisades Creek Ranch
Gallatin NF	Gardner Basin Noxious Weed Inventory	Map distribution and density of weeds, model potential spread on a key portion of the northern winter range.	Foundation for North American Wild Sheep; Montana State University; Montana Dept. Fish, Wildlife and Parks
Shoshone NF	Shoshone Invasive Species Project	Complete inventory of forest, treat wilderness infestations, and establish Upper Wind River Weed Management Area.	BLM; Fremont County; Cody Conservation District; South Central Wyoming College
Yellowstone NP	SW Yellowstone Backcountry Weed Survey and Control	Survey 10,000 acres for leafy spurge and other priority species. Increase prevention, early detection and containment along access roads.	Idaho Dept. of Agriculture; Fremont County, Idaho; Henrys Fork Weed Management Area Caribou-Targhee NF
Wildlife Studies and Projects			
Caribou-Targhee NF	Trumpeter Swan Nest Habitat Restoration	Improve water levels and nesting habitat for trumpeter swans nesting at four lakes (Swan, Beaver, Ernst, Mesa Marsh).	Trumpeter Swan Society; Idaho Department of Fish and Game; Ducks Unlimited; U.S. Fish & Wildlife Service
Caribou-Targhee NF	Wolverine Natal Denning Habitat Mapping and Field Surveys	Run GIS model to map potential wolverine den habitat on Caribou NF; conduct additional aerial & ground surveys.	Idaho Dept. of Fish and Game; Univ. of California at Santa Cruz
Gallatin NF	Effects of Backcountry Human Use on Bears and Other Large Carnivores	Final year of a four-year project addressing the relationship of bears to human backcountry activities during hunting season.	Interagency Grizzly Bear Study Team; Montana Dept. Fish, Wildlife & Parks; Hells a Roarin Outfitters; Student Volunteers
Grand Teton NP, Caribou-Targhee NF	Wolverine Survey and Monitoring	Evaluate wolverine habitat use and den selection in relation to human recreation use.	Wildlife Conservation Society; Hornocker Institute; Wyoming Game and Fish; Idaho Dept. of Fish and Game; Alta 4-H Club; Grand Targhee Resort
Yellowstone NP	The Presence and Distribution of Lynx in Yellowstone NP	Conduct intensive surveys in prime habitat using snow tracking and hair snares for DNA sampling.	Yellowstone Park Foundation
Soil and Watershed Management			
GYCC	Greater Yellowstone Soil and Landscape model	Develop digital seamless map for landscape data (vegetation, soils, landforms, geology) for entire GYA at landscape scale.	Partnership with units
GYCC	GYA Inland West Watershed Initiative Report	Report compiles GYA watershed data, identifies management strategies including restoration opportunities.	Partnership with units
GYCC	GYA Watershed Vulnerability Rating	Compile a consistent, reliable GIS or data layer that portrays vulnerability to disturbance.	Partnership with units

Yellowstone Cutthroat Trout Conservation Efforts

Unit	Project	Description	Parternerships
GYCC All units	Prepare a Yellowstone cutthroat trout population viability assessment	Coordinated approach to complete a consistent GYA-wide viability assessment that summarizes current status and condition of populations.	States of Idaho, Montana, Wyoming, all units
Custer NF Gallatin NF	Yellowstone River Yellowstone Cutthroat Distribution Study	Survey Yellowstone River tributaries on Custer and Gallatin NF to collect information on distribution and genetic status of trout populations.	Montana Department of Fish Wildlife & Parks; Montana State University
Gallatin NF	Gallatin River Basin Westslope Cutthroat Trout Reintroduction	Collection and analysis of baseline data for currently known or suspected fishless stream reaches in the Gallatin River basin.	Montana Dept. of Fish, Wildlife & Parks; Bozeman Watershed Council; Yellowstone National Park
Grand Teton NP	Effects of Irrigation Ditches on Water Quality/Cutthroat Trout Habitat on Snake R. Tributaries	Determine effects of irrigation on water quality and cutthroat trout habitat. Assess need for mitigation.	Wyoming Game and Fish
Caribou-Targhee NF	Role of Beaver in Trout Habitat & Hydrologic Function	Inventory Teton River drainage to see if beaver can help restore watershed function and health.	Idaho Div. of Environmental Quality; Idaho Fish and Game; Teton Soil Conservation District; Natural Resource Conservation Service
Caribou-Targhee NF	Yellowstone Cutthroat Distribution /Habitat Surveys and Mapping	Complete an additional 30 surveys in the Snake River drainage to determine Yellowstone cutthroat distribution and habitat quality. Twenty new populations were inventoried in 2000.	U.S. Bureau of Reclamation; Federation of Fly Fishers; Idaho Fish and Game; University of Idaho; Trout Unlimited; U.S. Fish and Wildlife Service
Yellowstone NP	Yellowstone National Park Distribution Map for Cutthroat Trout and Grayling	Develop historic and current GIS distribution layers for Yellowstone and westslope cutthroat, and grayling.	Coordinating with Shoshone, Gallatin, and Bridger-Teton National Forests
Yellowstone NP	Determination of Distribution and Severity of Whirling Disease in Yellowstone Cutthroat Trout in Yellowstone Lake Basin	Time series exposure tests of vulnerable cutthroat fry conducted at eight sites. Examine older cutthroat for signs of the disease.	Montana Dept. Fish, Wildlife and Parks; Wyoming Game and Fish; USFWS Bozeman Fish Health Lab
Caribou-Targhee NF	Pine Creek Fish Weir, South Fork of the Snake River	Install weir to prevent non-native fish from traveling upstream to spawn with native cutthroat trout.	Idaho Fish and Game; Trout Unlimited; One Fly Foundation
Education and Awareness			
Custer NF Gallatin NF	Yellowstone Cutthroat Interpretive Display	Develop mobile interpretive display portraying current status and conservation efforts for Yellowstone cutthroat trout.	
GYCC All units	Yellowstone Cutthroat Trout Interpretive Video/Documentary	Continue with FY 2000 project to develop a cutthroat trout documentary film for viewing on TV and for interpretive efforts.	Potential partners include nine states, five federal agencies, three foundations, and three conservation groups

Unit	Project	Description	Partnerships
Whitebark Pine Restoration and Management			
Caribou-Targhee NF	Whitebark Pine Planting	Plant 20 acres of whitebark pine.	Global Releaf; National Arbor Day Foundation
Gallatin NF	Whitebark Pine Planting	Plant 10 acres of whitebark pine on lands acquired from Big Sky Lumber.	National Arbor Day Foundation
GYCC All units	Hyperspectral Remote Sensing of Whitebark Pine	Analyze data collected in FY 2000 and prepare final report addressing feasibility for future inventory and monitoring efforts.	Yellowstone Ecosystem Studies; USGS, Biological Resources Division, Interagency Grizzly Bear Study Team
Shoshone NF	Whitebark Pine Planting	Plant 20 acres of whitebark pine.	National Arbor Day Foundation; Plant a Tree Foundation
Land Patterns			
Beaverhead-Deerlodge NF	Gravelly Mtns Land Exchange	Fund staff work to complete land exchange to acquire 219 acres of private land in the Gravelly Mountains.	
Gallatin NF	Royal Teton Ranch (RTR) Lands Work	Fund staff work associated with easements, rights-of-way, permits, and boundary management.	Rocky Mountain Elk Foundation
Gallatin NF	Duck Creek Wetlands-Critical Land Acquisition	Forest is pursuing purchase of property and funding will provide for continued negotiations to develop a purchase option.	
Gallatin NF	Slip and Slide Ranch Conservation Easement	Negotiate and secure a conservation easement for 700 acres of key winter range.	Rocky Mtn. Elk Foundation; Mont. Dept., Fish, Wildlife & Parks
Gallatin NF	Historic OTO Ranch Management Plan	Develop a management plan for historic ranch compatible with northern winter range and threatened and endangered habitat.	Amizade, Ltd, and Elder Hostel helping with restoration.
Shoshone NF	Howard Land Exchange, South Fork Shoshone	Help fund necessary staff work to complete land exchange to improve land patterns in the South Fork Shoshone River.	The Nature Conservancy
Recreation and Visitor Services			
All National Forests	Ride the Right Trail	Develop strategy, educational material, and signing to encourage ethical use of off-highway vehicles.	
Bridger-Teton NF	Teton Division Visitor Support	Increase summer staffing and presence at Blackrock RS, a major portal into Grand Teton and Jackson Hole.	
Bridger-Teton NF	Teton Wilderness Salt Site Study, Phase 2	Sample an additional 30 salting sites, conduct analysis, and produce final reclamation report.	University of Montana; other groups will help with restoration work in future
Bridger-Teton NF	Resort Naturalist Program	Partnership with 10 local resorts and dude ranches to provide interpretive programs.	10 resorts; Snake River Fund; 2 Eagle Scout projects
Custer NF Gallatin NF Shoshone NF	Beartooth Scenic Byway Corridor Management Plan	A Corridor Management Plan will coordinate interpretive and recreation opportunities and is needed to compete for All American Road designation.	Yellowstone Country; Rocky Fork Ranch; Red Lodge Lodging Assoc.; Red Lodge Chamber of Commerce; Cody Chamber of Commerce; Park County Travel Council
Gallatin NF Yellowstone NP	West Yellowstone Public Lands Info Desk	Provides funding necessary to staff key entry portal into the Greater Yellowstone Area at West Yellowstone.	Town of West Yellowstone
All national forests	Winter Use Monitoring	Implement a coordinated monitoring program for 6 national forests to collect information on use trends and where use is occurring.	Cooperating with states of Montana, Idaho, and Wyoming on data collection

Where we are going… current issues and priorities

Greater Yellowstone Coordinating Committee managers periodically identify priority resource management issues where coordination across the Greater Yellowstone Area is desirable. A brief description of current priority issues and strategies to address issues follows:

- Land Patterns
- Noxious Weed Management
- Lynx and Wolverine
- Yellowstone Cutthroat Trout Conservation
- GYA Waterways
- Winter Use Management
- Roadless/Wilderness Update
- Fire Management
- Data Management
- Grizzly Bear Recovery
- Whitebark Pine Management

Land Patterns within the Greater Yellowstone Area

The Greater Yellowstone Coordinating Committee (GYCC) identified land patterns as one of the top priorities for the federal land managers in the Greater Yellowstone Area (GYA). This high priority is in recognition of the rapid rate of development occurring throughout the area and the threat this poses to the ecological, scenic, and recreation values of the GYA.

Primary Goals of GYCC Land Patterns Initiative

- To establish logical and effective ownership patterns for public and private landowners, substantially reducing long-term costs to taxpayers. Federal management can be costly due to permitting special uses like powerlines and roads, surveying boundary lines, resolving wildlife conflicts, and providing protection from natural processes like fire.
- To protect critical habitat including big game winter range, threatened and endangered species habitat, key migration corridors, and rare or unique plant communities.
- To protect critical open space, natural appearing landscapes, and recreation opportunities including access to public lands. Often public access is lost when private lands are developed adjacent to or within federal lands.
- To protect valuable riparian areas, wetlands, watersheds and aquatic habitat for rare or sensitive species.
- To develop partnerships with others to help protect critical habitat and open space.

Scattered within the 14 million acres of federal lands are approximately 628,036 acres of private land inholdings. A portion of the private land inholdings are already developed with residences, summer homes, resorts, and in some cases towns. These developed lands are not the focus of a land acquisition/exchange program. Key undeveloped pri-

vate lands within and immediately adjacent to national parks, wildlife refuges, and national forests where there is a willing seller are the primary focus of unit land acquisition/exchange programs. Units determine acquisition priorities based on the critical resource and public values mentioned above, availability, and imminent risk of development. Tools available for this program include fee purchase, donations, land exchange, or purchase of a conservation easement to protect key property values.

Data compiled by the Greater Yellowstone Coalition points to the rapid growth around the GYA. The 20 counties surrounding the GYA grew at a rate of 14 percent between 1990 and 1999. Teton County, Idaho, experienced the fastest growth rate of 66 percent; followed by Teton County, Wyoming, 30 percent; Stillwater County, Montana, 27 percent; and Gallatin County, Montana, 26 percent. If this region were a state, it would be one of the fastest growing states in the nation. In addition to the ecological and social impacts of development, the value of land is escalating rapidly resulting in higher future costs to protect key components of this ecosystem.

Development can fragment key habitat, disrupt migration corridors, and lead to increased risk of mortality of threatened and endangered species. For example, data from the Yellowstone Interagency Grizzly Bear Study Team reveals that grizzly bear mortality associated with property damage, food conditioning, and aggression occur at a disproportionately higher rate on private land than on federal lands. While private lands comprise 2 percent of the land within the grizzly bear recovery zone and 29 percent of the lands within the adjoining 10-mile-perimeter area, nearly half of the mortality related to food conditioning, property damage, and aggression from 1985 to 1998 occurred on private land (13 on private land; 14 on public land).

New subdivisions can result in the loss of important wildlife habitat and disrupt travel corridors for moose, elk, bison, and grizzly bears. Development could occur within designated wilderness, near critical wetlands and riparian habitats, within the open space that provides the world-renowned views in the Jackson Hole area, and in key habitat for threatened and endangered wildlife and fish. Improving land patterns can help resolve long-standing issues with free-ranging bison, protection of geothermal resources, and critical wildlife winter range. In addition to protecting key ecological values, acquisition of inholdings may reduce long-term federal management costs associated with land surveys, permit processing, road maintenance, and increased fire protection costs.

Summary of private and state owned lands within proclaimed boundaries of forests, parks, and refuges.

Unit	Federal lands	Private/ state inholdings	
Bridger-Teton NF	3,400,198	39,038	
Beaverhead NF– Madison RD	730,000	43,308	
Custer NF- Red Lodge RD	475,000	8,000	(est)
Gallatin NF	1,806,551	344,620	
Shoshone NF	2,436,850	29,707	
Targhee NF	1,820,000	45,348	
Caribou NF	986,969	98,993	
Yellowstone NP	2,220,000	0	
Grand Teton NP	310,000	3,481	
JDR Parkway	24,000	0	
National Elk Refuge	24,700	541	
Red Rock Lakes Refuge	45,000	15,000	
Total	14,279,268	628,036	

Private and state lands within designated wilderness includes 548 acres in the Washakie Wilderness on the Shoshone National Forest, 1,122 acres in the Absaroka-Beartooth Wilderness on the Custer and Gallatin National Forests, and 2,009 acres (state wildlife management area) in the Lee Metcalf Wilderness on the Beaverhead-Deerlodge National Forest.

Recent Accomplishments

Gallatin National Forest, Royal Teton Ranch. In partnership with the Rocky Mountain Elk Foundation and the Department of the Interior, the Forest Service recently protected 7,772 acres of critical habitat for elk, bison, grizzly bears, bighorn sheep, antelope, and mule deer north of Yellowstone National Park.

Gallatin National Forest, Big Sky Lumber Acquisition. In partnership with the Rocky Mountain Elk Foundation and the Montana Department of Fish, Wildlife and Parks, the Forest Service acquired critical habitat in the Taylors Fork of the Gallatin River. Valuable grizzly bear habitat, an important elk migration corridor, and one of the highest density moose wintering areas in the Greater Yellowstone Area were acquired.

Above: Taylors Fork of the Gallatin River and Royal Teton lands. Far left: Weed management, swan with cygnets, and Clarks Fork of the Yellowstone River, Shoshone National Forest.

Greater Yellowstone: Too Precious for Noxious Weeds

The Greater Yellowstone Coordinating Committee (GYCC) identified invasive species, specifically noxious weeds, as one of the priority management issues to be addressed within the Greater Yellowstone Area (GYA). The high priority is in recognition of the ecological threat posed by invasive species to native plant communities and wildlife that depend upon these communities.

Invasive species are those plants not native to a region which, when introduced either accidentally or intentionally, out-compete native plants for available resources, reproduce prolifically, and dominate regions and ecosystems. Because they often arrive in new areas unaccompanied by their native predators, invasive species can be difficult to control. Left unchecked, noxious weeds have the potential to transform entire ecosystems, as native species and those that depend on them for food, shelter, and habitat, disappear.

All units are engaged in active and integrated noxious weed programs that include prevention, awareness and education, manual, chemical and biological control efforts, and inventory and mapping. The Greater Yellowstone Weed Group meets periodically to share information and to develop coordinated strategies. An overview of the current situation as well as current and proposed management actions follows.

Control and Management

When invasive species appear to be permanently established, the most effective action may be to prevent their spread or lessen their impacts through control measures. Control and management of invasive species encompasses diverse objectives such as eradication within an area, population suppression, limiting spread, and reducing effects. Integrated pest management (IPM) is an approach to invasive species that flexibly considers available information, technology, methods, and environmental effects. Methods include removal (e.g., hand-pulling, burning, and mowing), judicious use of pesticides, release of biological control agents (such as host-specific predatory organisms), and cultural practices.

In general, control efforts are improving thanks to increases in funding and the success of cooperative efforts. However, funding has not been adequate to prevent the spread of weeds and to implement a fully integrated program. One bright spot is the multiple partnerships created with organizations like the Rocky Mountain Elk Foundation, the Foundation for North American Wild Sheep, state fish and game departments, and local conservation districts and weed management areas.

GYCC Recommendations:

- Units will identify current budget levels and the program level necessary to fund a fully integrated invasive species management program. The GYCC weed committee will continue to look for opportunities to share resources and reduce duplication of efforts. Unit managers and the executive coordinator will explore options to increase funding.
- Units will update current inventories by species. The committee will use this information to help classify noxious weeds in terms of GYCC priorities. Weeds that pose little risk to native plant communities will be a lower priority whereas species that pose the greatest risk to natural communities will be the highest priority. Priorities will be helpful in developing GYA-wide education and awareness tools, prevention strategies, inventory and mapping strategies, and integrated control measures.
- Cooperative training across unit boundaries will be encouraged.
- GYCC project funds will continue to be directed towards cooperative control projects. Good examples include the spotted knapweed project along the Gros Ventre River involving Grand Teton National Park, the National Elk Refuge, the Bridger Teton National Forest, and private land, and the partnership to control dalmation toadflax on the South Fork of the Shoshone River.

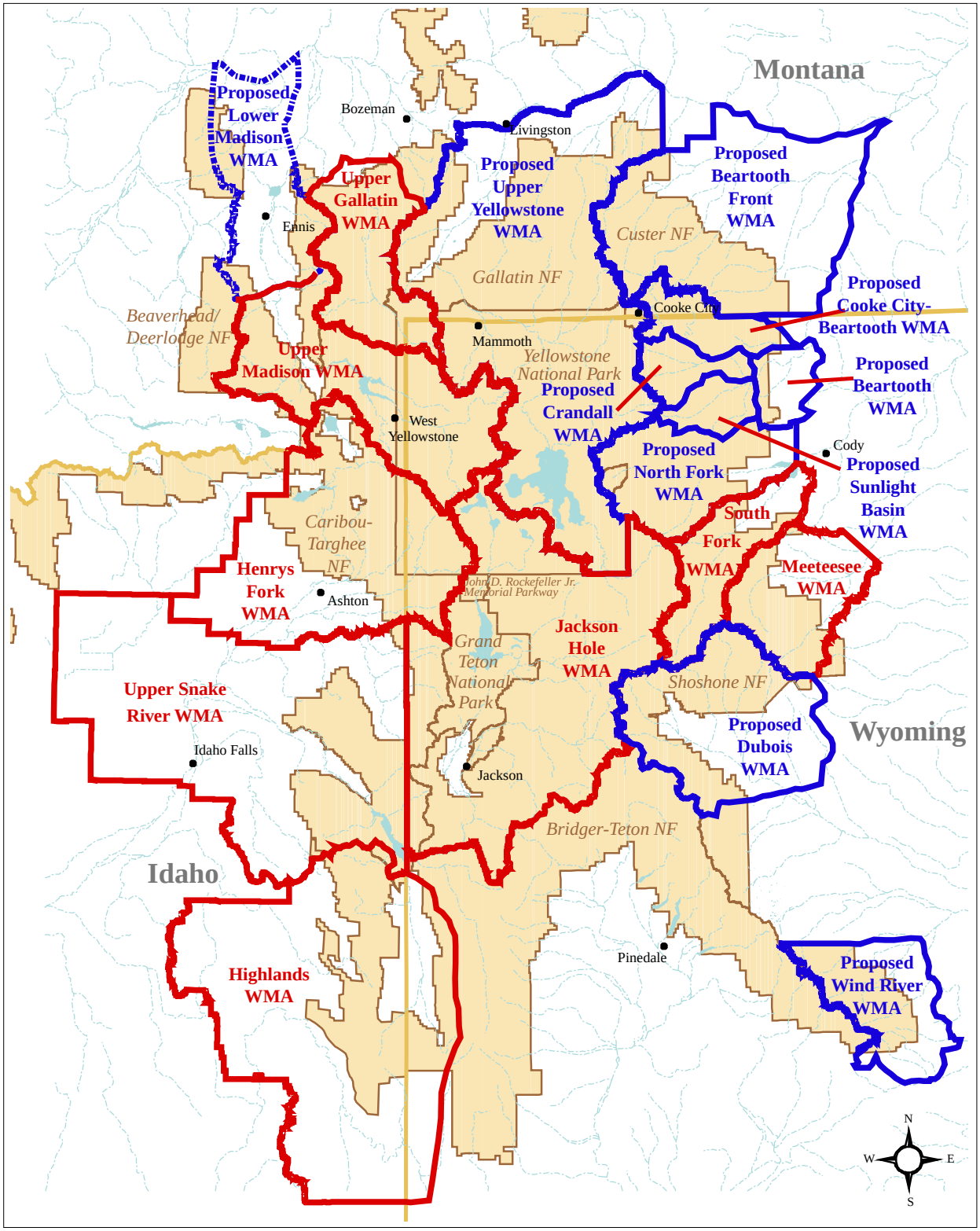
Prevention

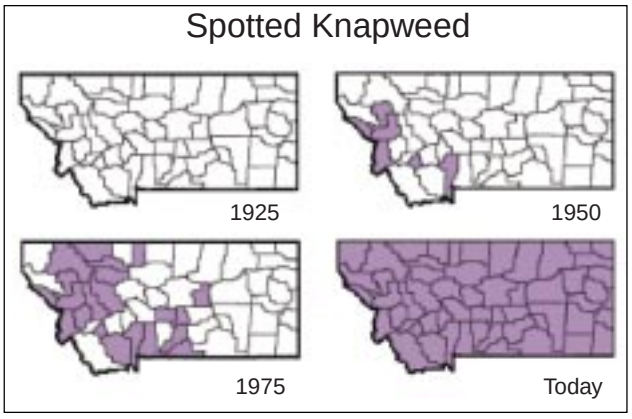
The first line of defense is prevention. Often, the most cost-effective approach to combating invasive species is to keep them from becoming established in the first place. Most units have adopted standards, guidelines, and best management practices to prevent the introduction of new weeds. A good example is the weed free feed regulations that require livestock feed to be free of weeds.

GYCC Recommendations:

- Recommend use of best management practices (used in Forest Service Regions 1 and 4) for all GYCC units. Conduct periodic reviews on each unit to help ensure practices are appropriately applied.
- Complete GYA-wide risk map for key species showing potential spread based on weed ecology and habitat types or groups. Tier to Forest Service Region 1 approach. Risk maps depict the vulnerability of various habitat types to weed infestation, and help determine priority areas for monitoring, prevention, and mitigation measures.

The Greater Yellowstone Area: Weed Management Areas (WMA)





Today, spotted knapweed is present in all Montana counties.

Early Detection and Rapid Response

We cannot prevent all introductions. However, early detection of introductions and quick, coordinated response can eradicate or contain invasive species at much lower cost than long-term control, which may be infeasible or prohibitively expensive. Invasive species should be detected and dealt with before they become established and spread.

Monitoring and early detection is largely dependent upon the noxious weed crews and coordinators. There is a limited number of people who can recognize the new invaders. Monitoring is primarily focused on travel corridors; detection of new infestations in backcountry or remote areas is more difficult. With over 78 percent of the ecosystem either roadless or designated wilderness, keeping track of backcountry infestations remains a challenge.

GYCC Recommendations:

- Develop partnership/pilot project with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds to develop a GYA early warning system and rapid response capability. Ensure that information on new invaders is rapidly shared amongst units and cooperators.
- Explore options for a systematic approach to help ensure that high risk areas are examined on a periodic basis.
- Increase emphasis on internal (employees and cooperators) awareness to augment detection capabilities. This is particularly important given the large, primarily unroaded land area and limited staffs dedicated to weed management.

Education and Public Awareness

How invasive species are viewed is molded by human values, decisions, and behaviors. The prevention and control of invasive species will require modifying behaviors, values, and beliefs and changing the way decisions are made regarding our actions to address invasive species.

Even with funding constraints, the awareness and education program trend has improved with increased signing, cooperative efforts with states, counties, and weed management areas, education efforts with schools and forest and park visitors, and implementation of best management practices for a wide variety of forest and park uses.

GYCC Recommendations:

- In cooperation with partners from Montana State University and the Center for Invasive Plant Management, develop strategy and products to increase awareness, prevention, and early detection capabilities across the ecosystem. Ideas include a slide presentation for use by all units, an interactive "Jeopardy" game, posters, and a GYA pocket guide to help increase awareness among all employees, contractors, outfitters, and concessionaires.

Information Management

The long-term goal is to provide accessible, accurate, and comprehensive information on invasive species that will be useful to local, state, tribal, and federal managers, scientists, policy-makers, and others.

GYCC Recommendations:

- All units will maintain current inventory maps that can be compiled into an GYA-wide map of current infestations.
- Compile a year-end report that summarizes major activities, information on new invaders, cooperative activities, and accomplishments.

Cooperative Weed Management Areas

CWMAs consist of private landowners, local, state and federal representatives working together to manage weeds in a defined area. Benefits of CWMAs include shared resources and data, more effective control efforts with agreed upon priorities, community education programs, and improved overall coordination with management. Private sector/county involvement is critical for success. Currently there are eight established weed management areas operating in the GYA.

GYCC Recommendations:

- Cooperate with local counties, state, and other agencies to support existing weed management areas and to establish additional ones.

For additional information about invasive species, contact: Jackson Hole Weed Management Area website: http://www.jhwma.org/

The national invasive species information system: http://www.invasivespecies.gov/

Status of Lynx and Wolverine Studies and Monitoring Efforts within the Greater Yellowstone Ecosystem

With the recent listing of Canada lynx *(Lynx canadensis*) as a threatened species, and the petitioning of wolverine (*Gulo gulo*) as a threatened or endangered species, Greater Yellowstone Coordinating Committee units are engaged in various studies to help determine the extent, distribution, potential habitat, and prey base for lynx and wolverine.

The Canada lynx is a rare forest dwelling cat of northern latitudes. The distribution of lynx is closely associated with the boreal forest that typically consists of spruce and subalpine fir with inclusions of whitebark and lodgepole pine. Lynx feed primarily on snowshoe hares but also will eat small mammals and birds. Persistence of lynx is closely tied to snowshoe hare distribution and density.

The Forest Service has signed a Conservation Agreement with the U.S. Fish and Wildlife Service that will promote conservation of lynx and its habitat on federal lands. It identifies actions the Forest Service will take to reduce or eliminate adverse effects or risk to lynx and its habitat. These actions are a result of considering new information about Canada lynx contained in the Lynx Science Report and the Lynx Conservation Assessment Strategy.

Lynx.

National Monitoring Protocols

In 1999, as part of the Forest Service Carnivore Conservation program and the subsequent Conservation Agreement between the Forest Service and the U.S. Fish and Wildlife Service, the Forest Service initiated a national lynx survey to determine the presence/absence of lynx on national forests and national parks across historic lynx range. A total of 50 surveys were completed within 36 different national forests and one national park during the survey season beginning in July of 1999 and ending in March of 2000. Most of these surveys are being repeated during the second round which began in June of 2000 and will be completed in March of 2001.

Of the 50 national protocol lynx surveys completed in 1999, DNA analyses detected lynx on just four surveys—Sunlight Basin/Beartooth area, Shoshone National Forest, the

Within the Greater Yellowstone Area (GYA), surveys have been completed or are planned for the following units.

Forests/Parks	General Vicinity of transects	Preliminary Results
Bridger-Teton NF	Wyoming Range	"Test" survey to help refine sampling techniques and estimate detection probability. Two survey rounds completed, but no positive results to date.
Targhee NF	Centennial Mountains Island Park Plateau	Two survey rounds completed, but no positive results to date. Two survey rounds completed, but no positive results to date.
Caribou NF	Soda Springs Montpelier Divide	First survey round completed in 2000, no positive results to date.
Shoshone NF	South Absaroka Mtns Sunlight Basin/Beartooths	Two survey rounds completed, but no positive results to date. Positive results from 1999 surveys. Transects not operational in FY 2000.
Beaverhead NF	Pioneer Mountains	"Test" survey to help refine sampling techniques and estimate detection probability. Two survey rounds completed, but no positive results to date.
Yellowstone NP	High-probability habitat within park	Will use national monitoring protocol, starting in 2001.
Grand Teton NP	High-probability habitat within park	Surveys using protocol developed by Weaver to commence in FY 2000.

Wolverine.

Seeley Lake area on the Lolo National Forest, the Boise National Forest, and the Okanogan National Forest. Results of the second round (2000 survey season) have not yet been reported.

Other on-going activities include lynx habitat mapping, winter track surveys and remote camera installations, and snowshoe hare density surveys. A study in cooperation with the Rocky Mountain Research Station (lead scientist Kevin McKelvey) is underway to help determine snowshoe hare density in relation to various vegetation types and successional stages on the Caribou-Targhee National Forest.

Status of Wolverines in the GYA

Wolverines were recently petitioned for listing as a threatened or endangered species under the Endangered Species Act. Wolverines occur in low-density populations and are one of the least studied carnivores in North America, particularly in the lower 48 states. Historical reductions in the distribution of wolverines seem to correlate with the encroachment of human civilization and suggest the species is especially sensitive to environmental perturbations and to local extinction.

The lynx steering committee consisting of Forest Service, National Park Service, U.S. Fish and Wildlife Service, and BLM expanded their charter to include wolverine on October 27, 2000. The steering committee plans to develop a wolverine conservation assessment and strategy similar to what was developed for the lynx. Products include a science assessment (including an historic map of wolverine occurrence), field monitoring protocol, and a conservation strategy. Additional wolverine research is planned through the University of Montana and the Rocky Mountain Research Station.

Wolverine research in Idaho and two snowtracking studies in Europe documented female wolverines abandoning reproductive dens as a result of human disturbance. This sensitivity to disturbance and the lack of data on the intensity and distribution of human winter recreational use indicates the need for more specific information on wolverine habitat use, denning requirements, and recreational use.

Grand Teton National Park/ Caribou-Targhee National Forest

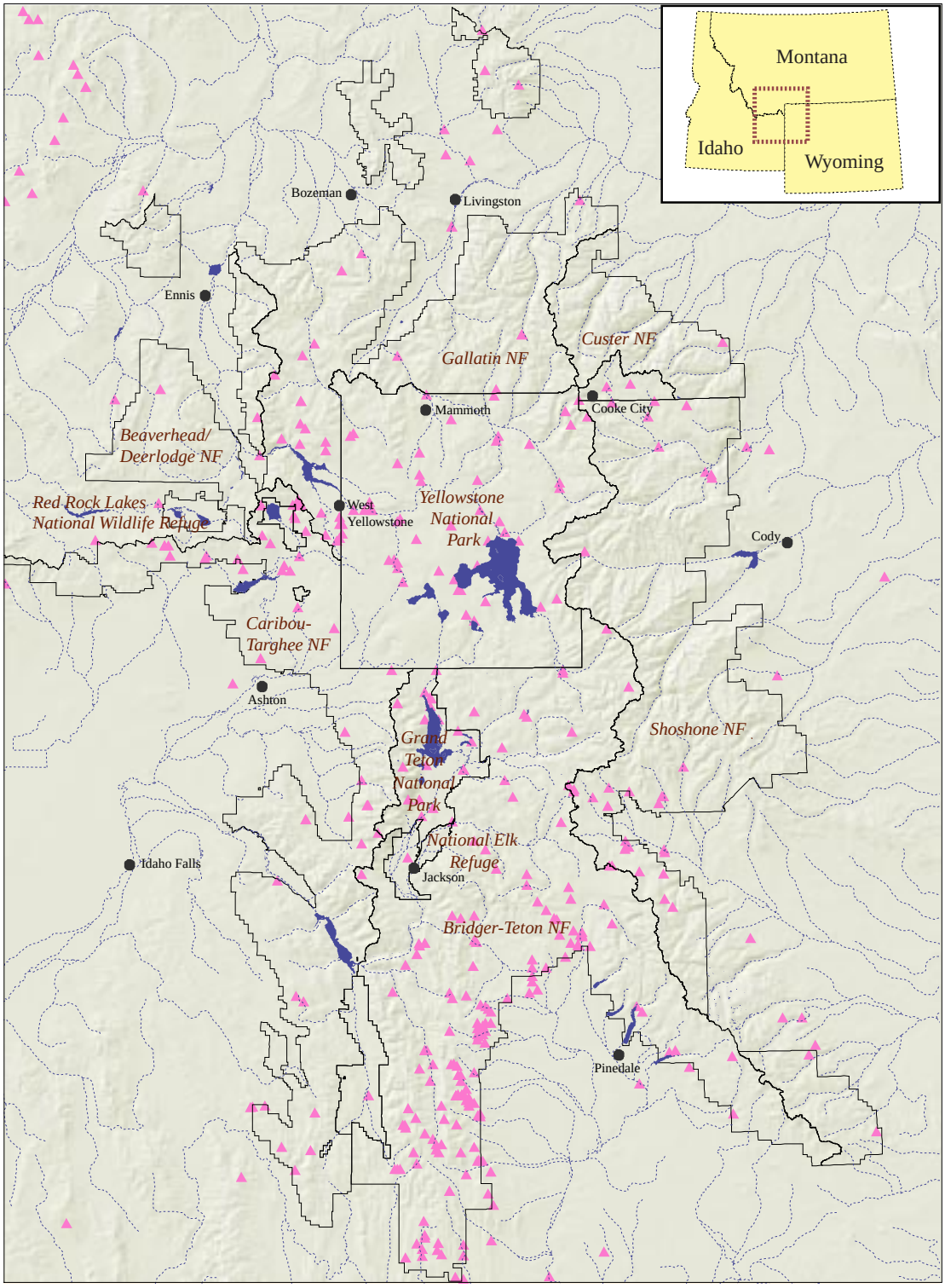
The Wildlife Conservation Society, U.S. Forest Service, Wyoming Game and Fish Department, The Wolverine Foundation, Alta 4-H Exploring Natural Resources Club, Idaho Department of Fish and Game, Grand Targhee Resort, and the Hornocker Institute are involved with a study to evaluate wolverine habitat use in late winter, spring, and summer and den selection in relation to human recreation use in Grand Teton National Park and Targhee National Forest.

The data will be used to develop a more comprehensive long-term study plan directed at investigating the ecology of wolverines and the seasonal impact of human recreation use on wolverine habitat use in the Teton Range. The longer-term study will also include new study sites which at this time may include the Spanish Peaks area north on the Gallatin National Forest. The results of this longer-term study may be incorporated into comprehensive recreational use and monitoring plans by Grand Teton National Park and the Targhee National Forest and will be provided to the Park and Forest Service in the form of a report. Publication will be sought in peer-reviewed scientific literature.

The University of California, Santa Cruz, and the Idaho Department of Fish and Game are working with the Caribou-Targhee National Forest to develop a GIS model to identify potential wolverine denning habitat. Helicopter flights are planned to help validate the model.

For additional information on lynx, go to:
http://www.r6.fws.gov/endspp/lynx/

Greater Yellowstone Area: Lynx Sightings (1874–1998)



Bringing Back the Natives: Cutthroat Trout Conservation Efforts

Yellowstone cutthroat trout (YCT) is a keystone species within the Greater Yellowstone Ecosystem. In addition to providing delight to thousands of anglers, YCT is a key food for grizzly bears, otters, eagles, ospreys, and mink. Up to 20 percent of the annual diet of grizzly bears around Yellowstone Lake consists of spawning cutthroat trout.

The rivers and streams of the upper Snake, Missouri, Green and Yellowstone River basins teemed with cutthroat trout at the time of Lewis and Clark and other early explorers. YCT historically occurred in the Snake River drainage from the headwaters down to Shoshone Falls in the Columbia River basin, and in the Yellowstone drainage from the headwaters down to at least the confluence of the Bighorn River near Billings, Montana.

Populations have declined from historic levels largely due to habitat changes and influences from non-native fish species that were stocked throughout both basins. Genetically pure YCT populations were substantially reduced over much of the historic range due to hybridization with stocked rainbow and westslope cutthroat trout. Other causes of YCT decline and existing threats include habitat degradation, whirling disease, New Zealand mud snails, and the introduction of non-native fish species (e.g., lake trout) that compete with and prey on YCT.

Because of the decline in distribution, and threats to existing intact populations, the agencies have classified YCT a species of concern, and are taking management and conservation steps to reduce threats and ensure the long-term persistence within its native range. YCT was petitioned for listing under the Endangered Species Act. The Fish and Wildlife Service determined that listing is not warranted at this time. The Service found that although the number of YCT stocks in large rivers have declined from historic levels, viable self-sustaining populations remain widely distributed throughout the historic range of the subspecies. Many of the strongholds for YCT occur within roadless or wilderness areas, or in Yellowstone National Park, all of which afford considerable protection to the fish.

Conservation Measures

The National Park Service, U.S. Forest Service, the U.S. Fish and Wildlife Service and the states of Idaho, Montana, and Wyoming are working together to "protect the best" of the remaining YCT habitat, and to restore key habitat and populations.

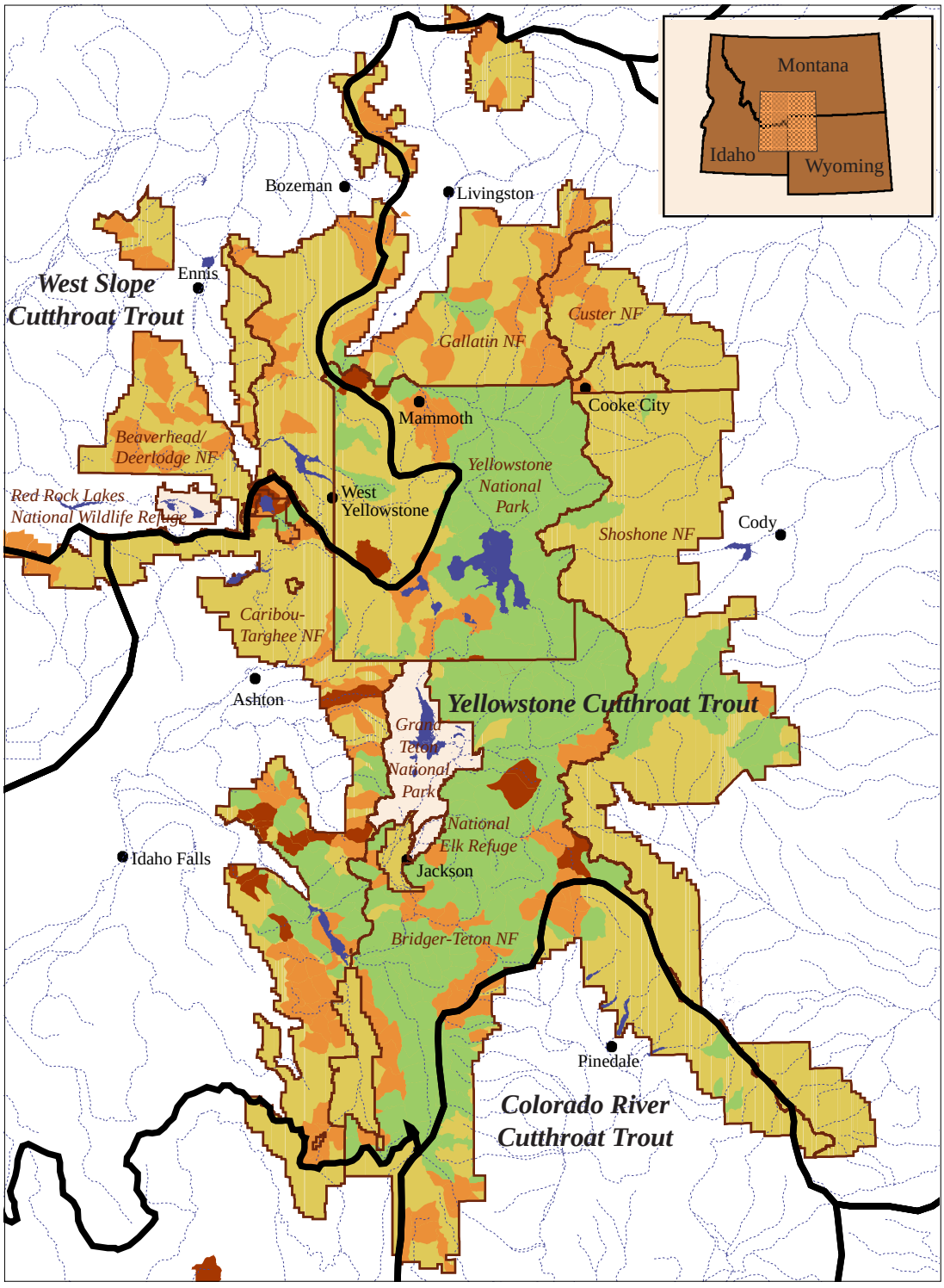
Key management activities include:

- Identify all YCT populations within the historical native range and maintain a database with the most current distribution.
- Identify genetic purity of existing populations. Prioritize populations based on genetic purity, population size, and unique characteristics.
- Secure and enhance all known and suspected genetically pure YCT populations, and high priority hybrid populations. These efforts might include, but are not limited to:
  - Isolation of populations to prevent invasion by hybridizing and/or competing non-native fish.
  - Habitat restoration where possible.
  - Modification of land uses to provide for YCT habitat and population protection.
  - Expansion of current populations within the context of their streams and watersheds.
  - Suppression or eradication of non-native fish species that are competing with, preying on, or hybridizing with native YCT.
  - Stocking of non-native trout will not be planned or carried out in drainages or portions of drainages that support pure YCT where such stocking has the possibility of harming a pure YCT population. Stocking of non-native trout would not occur in habitats selected as potential restoration sites.
  - More restrictive limits will be considered where angler harvest is altering population age/size structure and affecting recruitment.

A public outreach effort specifically addressing YCT conservation will be developed and implemented by the agencies having responsibility for YCT conservation. Public outreach efforts will utilize the many and varied options available to get the native trout story to the public.

GYCC Projects. Over the past two years, GYCC has funded 11 projects to help improve cutthroat trout habitat, inventories, knowledge and awareness. Refer to page 12 for a summary of the projects.

Greater Yellowstone Area: Cutthroat Trout Distribution



Waterways: The Headwaters of a Continent

The Greater Yellowstone Area (GYA) is the headwaters to several of America's most prominent rivers including the Missouri, Yellowstone, Snake, and Green. Waters of the GYA are renowned for their excellent fishing in superlative settings. Legendary rivers such as the Henrys Fork, Firehole, Madison, Yellowstone, and Snake attract anglers from around the world. Not only are these headwaters important for fish, wildlife, and recreation in the upper reaches, communities downstream depend upon the clean and abundant flows for domestic, agricultural, and industrial use. Water may very well be the most valuable resource from federal lands in the GYA. A vital function of GYCC units is to ensure the integrity of these important waters at their source.

Federal agencies in the GYA manage large amounts of public land to protect water quality and aquatic ecosystems. This management is directed and guided by numerous laws, rules, regulations, and policies. One guiding document of recent significance is the *Unified Federal Policy for a Watershed Approach to Federal Land and Resource Management*, published in the Federal Register October 18, 2000. This policy is one outcome of the *Clean Water Action Plan: Restoring and Protecting America's Waters*, which was released in 1998 to "provide a blueprint for restoring and protecting the nation's precious water resources."

The Unified Federal Policy provides a framework for a watershed approach to federal land and resource management activities by:

- using a consistent and scientific approach to manage federal lands and resources and to assess, protect, and restore watersheds;
- identifying specific watersheds in which to focus funding and personnel for accelerating improvements in water quality, aquatic habitat, and watershed conditions;
- using the results of watershed assessments to guide planning and management activities in accordance with applicable authorities and procedures;
- working closely with states, tribes, local governments, private landowners, and stakeholders to implement this policy;
- meeting Clean Water Act responsibility to comply with applicable federal, state, tribal, interstate, and local water quality requirements to the same extent as non-governmental entities; and
- taking steps to ensure that federal land and resource management actions are consistent with applicable federal, state, tribal, and local government water quality management programs.

The Greater Yellowstone Coordinating Committee developed a watershed management strategy for the GYA. The strategy is consistent with the U.S. Forest Service Natural Resource Agenda and National Park Service Natural Resource Challenge, as well as strategic plans recently developed by both agencies in response to the Government Performance and Results Act (GPRA). The strategy utilizes information available from the Inland West Water Initiative, which is described below.

Inland West Water Initiative

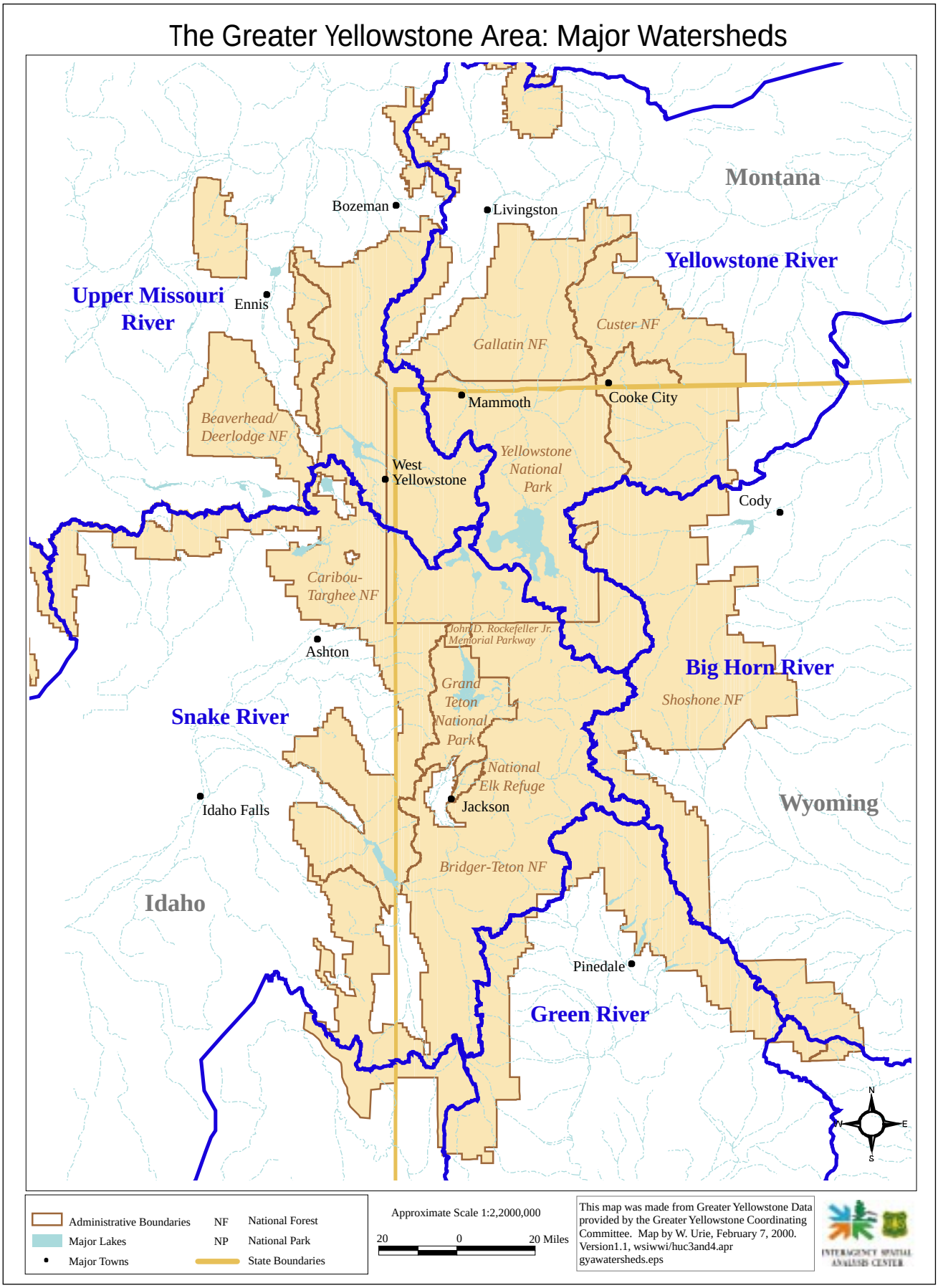
National forests in the interior west states of Montana, Idaho, Utah, Nevada, Arizona, New Mexico, Colorado, Wyoming, and South Dakota completed a project called the *Inland West Water Initiative*. The project was created as a proactive strategic step to protect vital water related resources on national forest lands. A primary initial task was completion of a rapid watershed reconnaissance that, through the use of existing information, resulted in a database that identifies the:

- watershed vulnerability (inherent risk of conducting activities within a watershed),
- crucial stream segments (locations of critical water-dependent resource values at risk that need priority protection),
- damaged stream segments (locations of damaged soil, riparian and aquatic resource values that need to be restored), and
- geomorphic integrity and water quality integrity, respectively (probable condition of watersheds and aquatic systems at a consistent scale of resolution).

This initial task was completed in the late 1990s. In 2000, national forest staff in the GYA worked cooperatively with staff from Yellowstone National Park to produce comparable information for the park. Similar efforts are presently being pursued by the committee for Grand Teton National Park and the National Elk Refuge, Red Rock Lakes Refuge, and Greys Lake Refuge.

The assessment, based on existing data, will be useful for developing watershed restoration priorities, for project and land use planning at the unit level, and for identifying cooperative watershed management opportunities. Additional recommendations include development of a comprehensive, GYA-wide inventory of abandoned mines and contaminated sites, along with a strategy to work with states and others to reclaim these sites.

For additional information go to www.cleanwater.gov.


The Greater Yellowstone Area: Major Watersheds
Montana
Bozeman
Livingston
Yellowstone River
Upper Missouri River
Ennis
Gallatin NF
Custer NF
Mammoth
Cooke City
Beaverhead/ Deerlodge NF
West Yellowstone
Yellowstone National Park
Cody
Caribou-Targhee NF
John D. Rockefeller Jr. Memorial Parkway
Ashton
Big Horn River
Shoshone NF
Grand Teton National Park
Snake River
National Elk Refuge
Idaho Falls
Jackson
Wyoming
Bridger-Teton NF
Idaho
Pinedale
Green River
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E
S
Administrative Boundaries
Major Lakes
Major Towns
NF National Forest
NP National Park
State Boundaries
Approximate Scale 1:2,000,000
20 0 20 Miles
This map was made from Greater Yellowstone Data provided by the Greater Yellowstone Coordinating Committee. Map by W. Urie, February 7, 2000. Version1.1, wsiwwi/huc3and4.apr gyawatersheds.eps
INTERAGENCY SPATIAL ANALYSIS CENTER

Winter Recreation Use in the Greater Yellowstone Area

Winter in the Greater Yellowstone Area (GYA) is a special time of year when images of wildlife in winter, frozen waterfalls, snow-covered mountains, and the colorful thermal features attract visitors from around the world. With the increased use and popularity, how can managers ensure that national park and national forest resources are protected and that quality visitor experiences are provided?

Winter use of the parks and the surrounding national forests has increased significantly in the past 15 years. Yellowstone National Park's *Winter Use Plan* of 1990 established a visitation threshold of 140,000 people per year, a target projected to be met by year 2000. The threshold was exceeded in 1992. Snowmobile counts on the Hebgen Lake Ranger District, Gallatin National Forest, increased from 47,552 in 1984/85 to 101,691 in 1997/98, an increase of 113 percent.

In 1994, the Greater Yellowstone Coordinating Committee chartered an interagency study team to complete an assessment of winter use in the GYA. The 1999 publication, *Winter Visitor Use Management: A Multi-agency Assessment*, provided information on current winter use including winter trails, areas of concentrated use, and areas of recreation and resource conflict.

As a result of a 1997 lawsuit regarding winter use, the National Park Service agreed to update their winter use plan. An environmental impact statement was prepared with extensive public involvement. The resulting winter use plan was approved for Yellowstone and Grand Teton National Parks, and for the John D. Rockefeller Jr. Memorial Parkway in December 2000. The plan calls for gradually phasing out personal snowmobile use over the next three seasons. In 2003–2004 and thereafter, most oversnow motorized visitor travel in the three park units would be by NPS-managed snowcoach only. In Grand Teton, snowmobile use would continue to be allowed on the Continental Divide Snowmobile Trail and on access routes leading to private lands and adjacent national forest lands.

Snowmobilers.

Management direction for winter use on surrounding national forests is outlined in existing land use management plans and in forest travel plans. Five of the six national forests within the GYCC will begin revision of their forest plans over the next few years. Reliable information on winter use will be important for updating management and travel plans, responding to anticipated legal challenges, and for management of threatened and endangered species including grizzly bears, lynx, and the petitioned wolverine. In addition, 36 CFR 295.5 requires monitoring of the effects of off road vehicle use on National Forest System lands and resources.

GYCC Activities

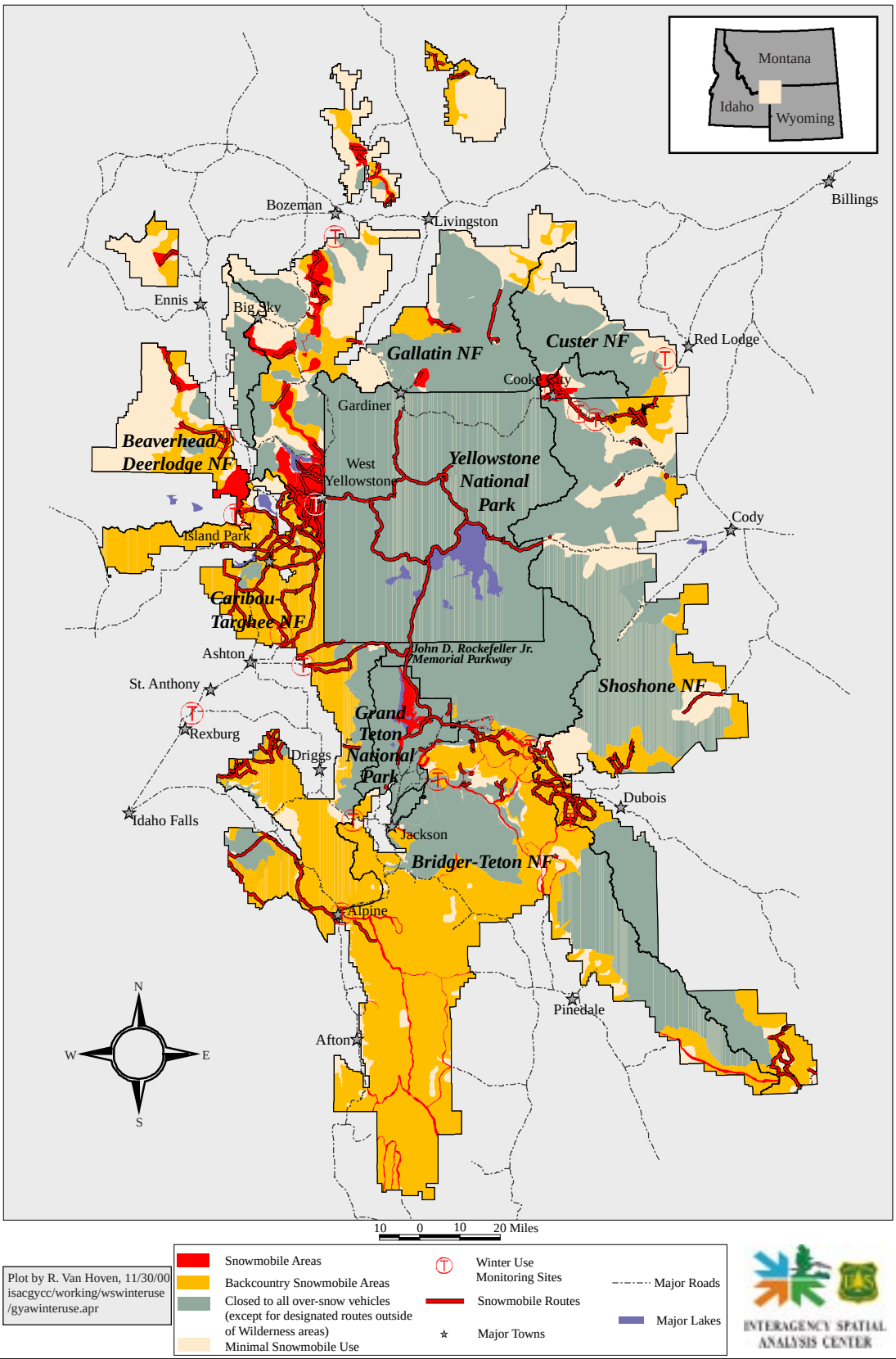
The GYCC recently developed a winter use monitoring plan designed to address the following issues on national forest lands:

- Will restrictions in snowmobile use in national parks result in changes in snowmobile use on national forests?
- How does winter use within the GYA affect forest carnivores, including denning and emerging grizzly bears, lynx, and wolverine?
- Where and to what extent is winter use occurring throughout the GYA? Is improved technology resulting in more access to traditionally remote areas?
- Where are areas of major recreation use conflict between visitors?
- Is the capacity and function of facilities adequate to safely accommodate existing and future use?

The monitoring plan calls for collection of recreation use trend data at key trailheads, mapping the geographic extent of winter recreation use, and monitoring recreation conflicts.

Other GYCC activities include the 1999 publication *Effects of Winter Recreation on Wildlife of the Greater Yellowstone Area: A Literature Review and Assessment*. "Ride the Right Trail," an effort to improve signing and visitor awareness of winter travel restrictions including entry into wilderness, was financed with GYCC project funds.

Greater Yellowstone Area: Winter Use



Roadless and Wilderness Lands within the Greater Yellowstone Area

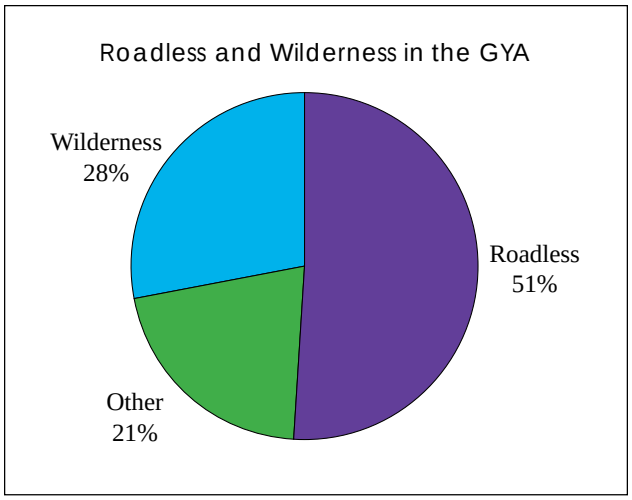
The Greater Yellowstone Area (GYA) is renowned for its scenic beauty, recreation opportunities, wildlife, clean water, and wild, natural settings. The undeveloped nature of this area is reflected by the fact that nearly four out of every five acres of federal land is either designated as wilderness or is essentially free of development and roads.

More than 95 percent of Yellowstone National Park's 2.2 million acres is considered backcountry and managed as wilderness. Although Congress has not acted on wilderness recommendations, the 2,033,000 acres recommended for wilderness is managed so as not to preclude wilderness designation. In Grand Teton National Park, 116,000 acres is recommended for wilderness designation.

Within Red Rock Lakes Wildlife Refuge 35,000 acres is designated wilderness, one of the few marshland wildernesses in the country.

On national forest system lands, 11 areas totaling nearly 4 million acres are designated as wilderness. Wilderness virtually surrounds the north, east, and south boundaries of Yellowstone National Park. The largest area is the 943,626-acre Absaroka-Beartooth Wilderness located on the Custer, Gallatin, and Shoshone National Forests.

Nearly 4.5 million acres of national forest lands within the GYA are considered roadless. In 1972 the Forest Service began identifying roadless areas for wilderness consideration through the Roadless Area Review and Evaluation (RARE I). In 1979, the agency completed RARE II, a more extensive national inventory of roadless areas. Most national forests and grasslands employed RARE II data to develop inventories of roadless areas. Subsequent forest plan revisions further evaluated inventoried roadless areas.



Future management of these lands will be guided by the Roadless Area Conservation Rule, approved in January of 2001. The rule:

- Prohibits new road construction and reconstruction in inventoried roadless areas on National Forest System lands, with exceptions for health and safety, environmental clean up, reserved or outstanding rights, and valid mineral leases.
- Prohibits cutting, sale, and removal of timber in inventoried roadless areas, except for removal of generally small diameter trees which maintains or improves roadless characteristics, for habitat improvement for threatened, endangered, proposed, or sensitive species, to maintain or restore ecosystem composition and structure, and for personal or administrative use.

Mountain goat on the Custer National Forest.

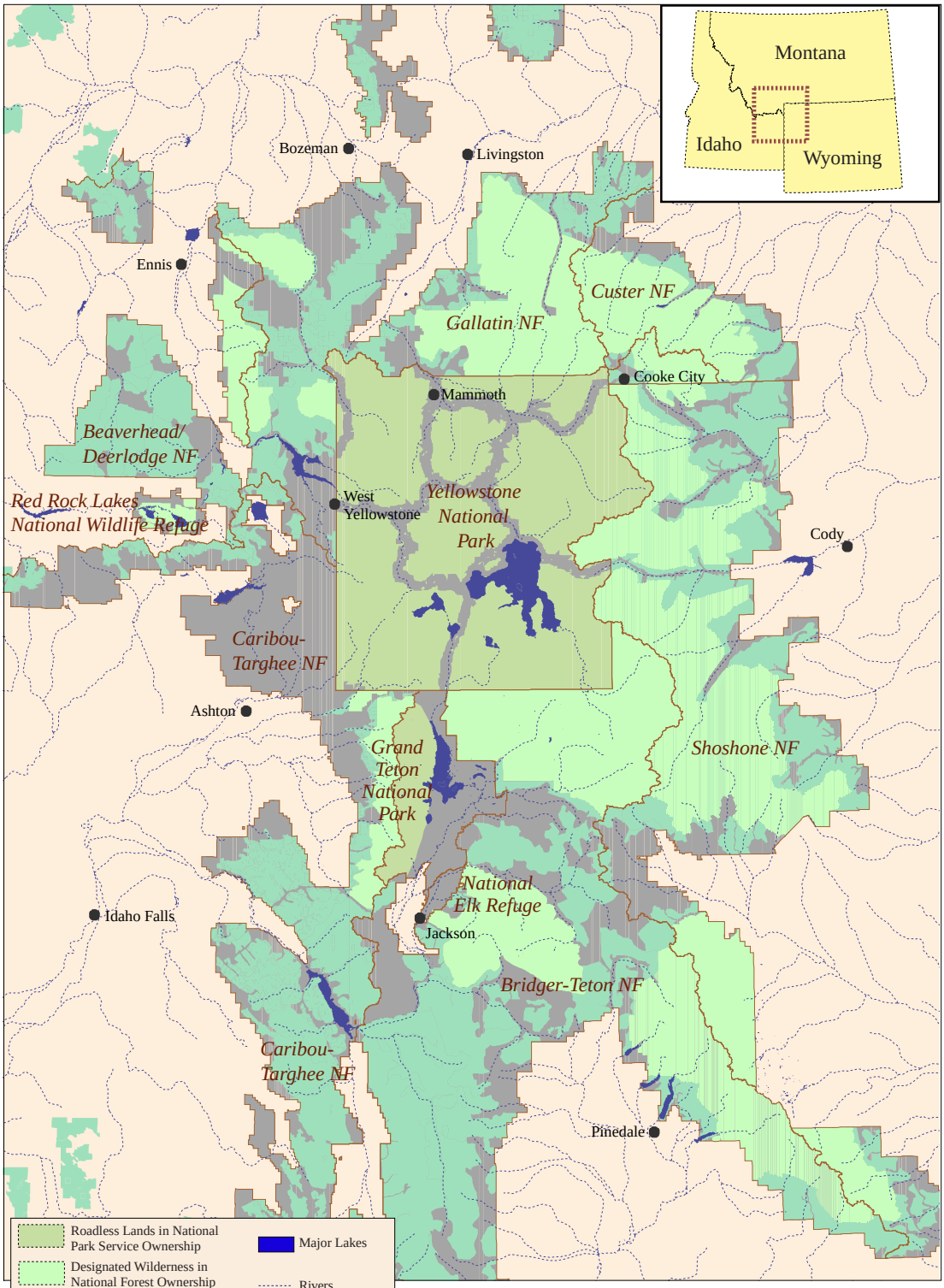
Agriculture Secretary Ann Veneman announced, on May 4, 2001, that amendments to the approved rule will be proposed in June 2001. The amendments will address more reliable information and mapping; additional local involvement; protecting forests from severe wildfire, insect and disease activity; protecting communities, homes, and property; and protecting access to property.

For additional information on the Roadless Area Conservation Rule, go to http://roadless.fs.fed.us/

GYCC Activities

Over the years, GYCC units have coordinated on wilderness and backcountry outfitter guide management, weed-free stock feed regulations, backcountry and wilderness recreation use regulations, wildland fire management, and winter recreation use. Wilderness and backcountry projects recently funded by GYCC include development of reclamation plans for salt sites in the Teton Wilderness, Bridger-Teton National Forest, a study of backcountry recreation use and grizzly bears in the Absaroka-Beartooth Wilderness, and noxious weed mapping and control in the Palisades Wilderness Study Area, Caribou-Targhee National Forest, and in the Absaroka Wilderness, Shoshone National Forest.

Greater Yellowstone Area: Roadless Lands



*Data from U.S. Forest Service Roadless Inventories and National Park Service; no data for wildlife refuges

A summary of roadless lands and designated wilderness in the Greater Yellowstone Area.

Unit[1]	Total area[2]	Acres of designated wilderness	Other designated acres WSA's	Total inventoried roadless[3]	% unit designated & roadless[4]	Designated Wilderness Areas	Designated Wilderness Study Areas
Custer NF Beartooth RD	475,000	345,599	0	88,000	91%	Absaroka Beartooth 345,599 ac	
Bridger-Teton NF	3,437,000	1,300,325	109,200	1,430,000	82%	Teton 585,238 ac Gros Ventre 287,000 ac Bridger 428,087 ac	Pallisades WSA 76,800 ac Shoal Cr WSA 32,400 ac
Gallatin NF	1,801,000	715,338	155,500	566,000	80%	Absaroka-Beartooth 574,744 ac Lee Metcalf 140,594 ac	Hyalite Porcupine WSA 155,500 ac
Beaverhead NF Madison RD	730,000	107,694	4,474	436,000	75%	Lee Metcalf 107,694 ac	Mt Jefferson WSA 4,474 ac
Shoshone NF	2,437,000	1,378,440	43,757	642,000	85%	Washakie 704,274 ac North Absaroka 350,488 ac Fitzpatrick 198,525 ac Popo Agie 101,870 ac Absaroka-Beartooth 23,283 ac	High Lakes WSA 14,770 ac Dunoir SMU 28,987 ac
Targhee NF	1,820,000	134,166	49,300	786,000	51%	Winegar Hole 10,715 ac Jedediah Smith 123,451 ac	Pallisades WSA 49,300 ac
Caribou NF	776,000	0	0	537,000	69%		
USFS totals	11,476,000	3,981,562	362,231	4,485,000	77%		
				Total Roadless[5]			
Yellowstone NP	2,220,000	0	0	2,176,000	98%		2,033,000 acres recommended for wilderness
Grand Teton NP	310,000	0	0	116,000	37%		116,000 acres recommended for wilderness
JDR Parkway	24,000		0	20,000	83%		
NPS totals	2,554,000	0	0	2,312,000	90%		
National Elk Refuge	24,700	0	0	0	0%		
Red Rock Lakes	45,000	35,000	0		78%	Red Rock 35,000 ac	
FWS totals	69,700	35,000	0	0	50%		
GYA totals	14,099,700	4,016,562	363,321	6,797,000	79%		

[1] Custer NF includes Beartooth Mtn portion of Beartooth RD. Entire acreage for Bridger-Teton, Gallatin, Shoshone, and Targhee NFs. Caribou NF includes eastern portion of forest adjacent to Bridger-Teton and Targhee. Beaverhead NF acres include all of the Madison RD.

[2] Forest Service acres based on USDA Forest Service Lands area report, Sept. 1998.

[3] Inventoried roadless areas are based on forest plans, forest plan revisions in progress where the Forest Service has established an inventory, or other assessments that are completed or adopted by the agency. RARE II information is used if a forest does not have a more recent inventory based on RARE II.

[4] The percent of roadless lands plus designated lands in relation to total unit acres.

[5] NPS does not have a formal roadless inventory process; acres identified are estimates for the parks.

Fire Management Planning and Coordination

Coordinated fire planning and management has long been a priority for the Greater Yellowstone Coordinating Committee (GYCC). Good coordination and planning is not only critical for the federal land units, it's equally important to work with states and counties to ensure integrated fire management programs. A wildfire recognizes no administrative boundaries! This is particularly important to consider as development increases on private land within and adjacent to public lands.

The overarching goal for GYCC fire management and coordination is safe and efficient management of wildland and prescribed fires. Due to the large amount of undeveloped land, wilderness and national parks, and the recognition of the vital role fire plays in the ecosystem, wildland fire use and prescribed fires will be the primary tools for managing vegetation and reducing fuels over a large part of the GYA. (Wildland fire use is defined as the management of naturally ignited wildland fires to accomplish specific resource management objectives as outlined in approved fire management plans. Prescribed fires are intentionally ignited fires designed to accomplish management objectives.)

One of the major post-1988 fire season recommendations was to improve coordinated planning and joint management of fire activities across jurisdictional boundaries. In response to this recommendation, the GYCC published "The Greater Yellowstone Area Interagency Fire Management and Coordination Guide." Originally published in 1990, the guide was revised in 1992, 1995, and in 2000.

The Greater Yellowstone Fire Managers team serves as the primary means for coordinating fire management planning and suppression. Primary activities and goals include:

- Providing specific operating principles and procedures to assure effective interagency coordination and management of wildland fires and prescribed fires in the GYA;
- Providing advice and consultation to managers for potentially large and/or complex fire incidents within the GYA;
- Sharing information through preparation of a GYA situation report that describes current fire activity, resource availability, and future outlook;
- Developing unit fire management plans that outline various strategies for managing or suppressing fires. A key role of the team is to ensure that comprehensive joint planning occurs across the boundaries of neighboring units to bring about completion of mutually acceptable fire management plans.
- Coordinating planning and execution of prescribed burns;

Left: "Fire shelter" on the Beaver Creek Fire, Gallatin National Forest. Right: Blind Fire, Bridger-Teton National Forest.

- Joint training and coordinated fire prevention and awareness programs.

In response to the 2000 fire season, the President directed federal agencies to take action to reduce immediate hazards to communities in the wildland urban interface, and to ensure that fire management planning and fire fighting personnel and resources are prepared for extreme fire conditions in the future. Primary goals of the National Fire Plan and their implications for the GYA are:

- ***Firefighting.*** Increase fire-fighting capability for initial attack, extended attack, and large fire support that will help reduce the number of small fires that grow into large fires, better protect resources, reduce the threat to local communities, and reduce the cost of large fire suppression. Within the GYA, many new fire positions will be added and helicopter and engine capability increased.
- ***Rehabilitation and Restoration.*** The goal is to restore landscapes and rebuild communities damaged by the wildfires of 2000. Within the GYA, 468 wildland fires burned 262,871 acres in 2000. Large fires did occur on most units, however communities were not threatened to the same extent that occurred in western Montana. Rehabilitation and restoration plans are in place for the large fires.
- ***Hazardous Fuel Reduction.*** Invest in projects to reduce fuel risk near the wildland urban interface. For example, on the Gallatin National Forest, fuel reduction projects are planned for the Cooke City/Silver Gate area, West Yellowstone, and the Gallatin River Canyon.
- ***Work directly with communities to ensure adequate protection.*** For example, the Bridger-Teton National Forest is working with local counties to identify areas at risk.

For additional information on the National Fire Plan go to: http://www.fs.fed.us/fire/ or http://www.nps.gov/fire/

Coordinated Information Management: Sharing the Data

Coordinated information management across agency and administrative boundaries has long been a priority for the GYCC. *An Aggregation of National Park and National Forest Management Plans*, published in 1987, was an early example of coordinated information management at the ecosystem level. This effort was followed up by the *Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area*, published in 1991.

Despite the complexities of managing data at the GYA level, there are compelling reasons to do so. For coordination to be truly effective for the GYCC, consistent and reliable data on key resources is necessary. Management of threatened and endangered species, watersheds, and wide-ranging noxious weeds benefits from coordinated information at the larger scale.

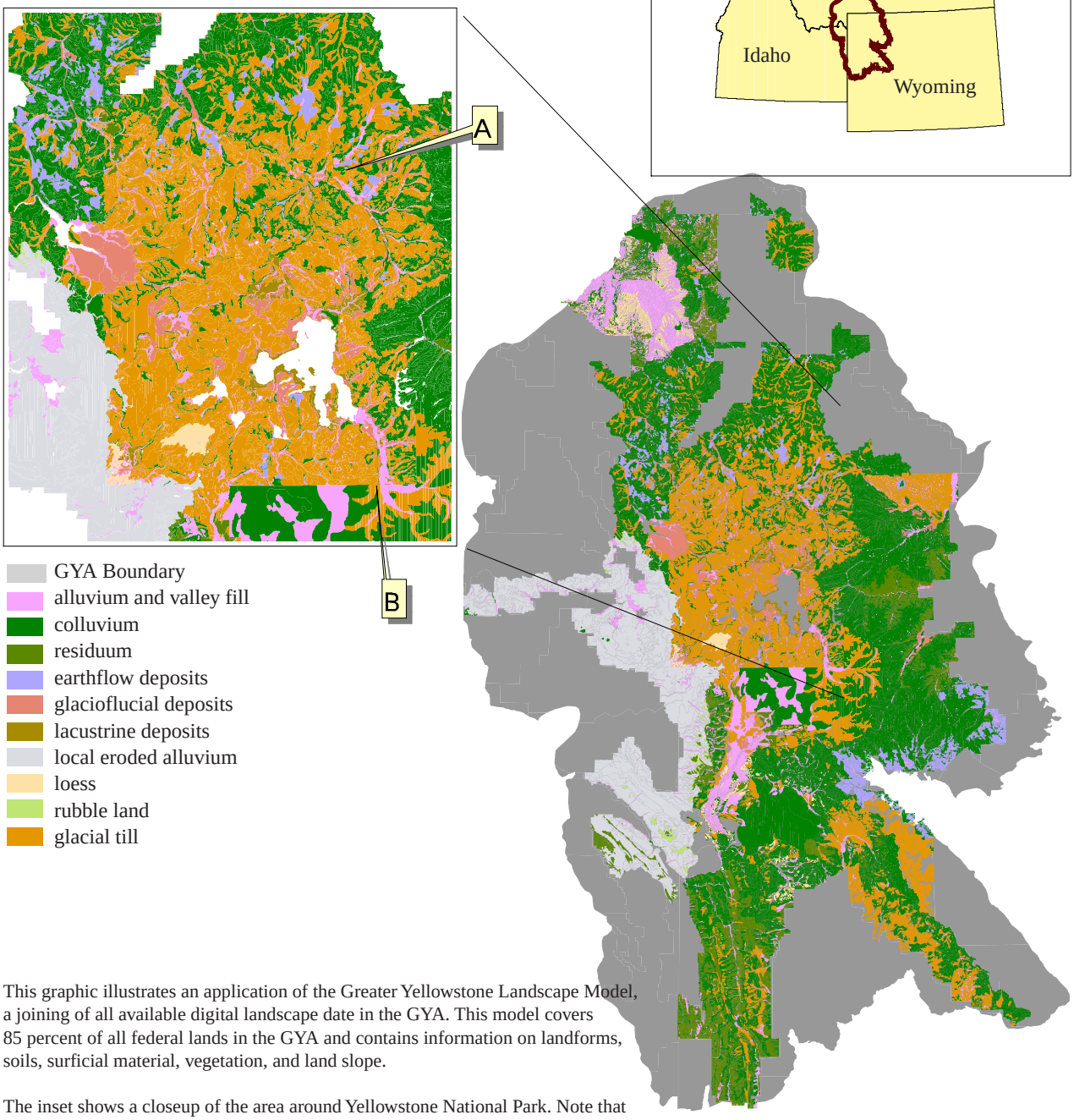
Technology has advanced to the point where sharing data across administrative boundaries is much easier today then it was five years ago. Remotely sensed data will continue to grow in importance due to increasing accuracy and decreasing costs. In certain cases, collection of data at the ecosystem scale may be more cost-effective than collection at individual units.

Top: Weed control activities. Above: Lamar Valley, Yellowstone National Park.

Current Examples of Coordinated Data/ Information Management

- ***Noxious Weed Mapping and Inventory***. Units are using common inventory and mapping standards to compile a noxious weed inventory. Sharing this information across the GYA helps identify treatment priorities, emerging problems, and opportunities for coordinated awareness and prevention efforts.
- ***Inland West Watershed Initiative.*** National forests and Yellowstone National Park have completed a rapid assessment of watershed conditions across the GYA. Information will be used to develop a comprehensive watershed strategy including priority watersheds for restoration efforts.
- ***Yellowstone Cutthroat Trout Conservation Initiative.*** The Forest Service, Park Service, and the states of Idaho, Montana, and Wyoming are working together to complete viability and risk assessments for Yellowstone cutthroat trout. GYA-wide maps that depict distribution, habitat conditions, and threats will be available.
- ***Grizzly Bear Cumulative Effects Model***. Vegetation**,** transportation, recreation, and management activity information is maintained in support of the cumulative effects model for the 11-million-acre grizzly bear recovery area.
- ***GYA Landtype Inventory***. A seamless digital landscape and soils layer for the entire public and private sector of the GYA has been developed. Products include a landscape model with vegetation, soils, landforms, parent material, and geology layers.
- ***GYA Roadless/Wilderness Status Map***. Existing wilderness and roadless areas within the GYA are compiled into one map.
- ***Winter Use Maps***. Data from the 1999 *Winter Visitor Use Management: A Multi-agency Assessment* was updated for current winter use monitoring efforts. Winter use maps depict major trails, areas of concentrated and dispersed use, and areas of recreation user conflict.

Greater Yellowstone Area: Landscape Model Application



This graphic illustrates an application of the Greater Yellowstone Landscape Model, a joining of all available digital landscape date in the GYA. This model covers 85 percent of all federal lands in the GYA and contains information on landforms, soils, surficial material, vegetation, and land slope.

The inset shows a closeup of the area around Yellowstone National Park. Note that boundaries of the park are difficult to see (A) because boundaries of map units were seamlessly matched across administrative boundaries, save for the lower right (B) where no match was made.

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Henry Shovic Feb.16, 2001.

Grizzly Bears in the Greater Yellowstone

On July 28, 1975, under the authority of the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service listed the grizzly bear (*Ursus arctos*) as a threatened species. At that time, an estimated 200 or fewer grizzly bears roamed the Greater Yellowstone Area (GYA). Today, there are an estimated 400-600 grizzlies in the GYA. The number of adult breeding females has grown from less than 30 in 1983 (the first year this sub-population was estimated) to over 100 today. With more bears who need to establish home ranges, the bears have begun reoccupying areas in their historic range where they had been absent for more than 40 years.

In 1983, the Interagency Grizzly Bear Committee (IGBC) was formed with members from the National Park Service, U.S. Fish and Wildlife Service, Forest Service, and the states of Idaho, Montana, Washington, and Wyoming. For each of the six ecosystems where grizzly bears could occur, an IGBC subcommittee focuses on specific management actions with the goal of ensuring adequate numbers of bears and suitable habitat for sustaining recovered populations. For the Yellowstone Ecosystem, grizzly bear management is coordinated by the Yellowstone Ecosystem Subcommittee (YES). Members include the line officers from each of the GYCC units, representatives from the states of Idaho, Montana, and Wyoming, and U.S. Fish and Wildlife Service and the Interagency Grizzly Bear Study Team.

The threatened status led to implementation of a grizzly bear recovery plan as required under the Endangered Species Act. The first *Grizzly Bear Recovery Plan* was developed in 1982 and was last updated in 1993. Management standards and guidelines for grizzly bears and their habitat are outlined in the recovery plans. Recovery activities include public education, reduction in bear access to food and garbage, evaluation of road densities, research on availability of grizzly foods, and studies of bears and their habitats. The objective of the recovery plan is to achieve self-sustaining populations in the wild that no longer need protection under the ESA.

Three goals must be achieved for two consecutive years before the grizzly bear population is considered recovered:

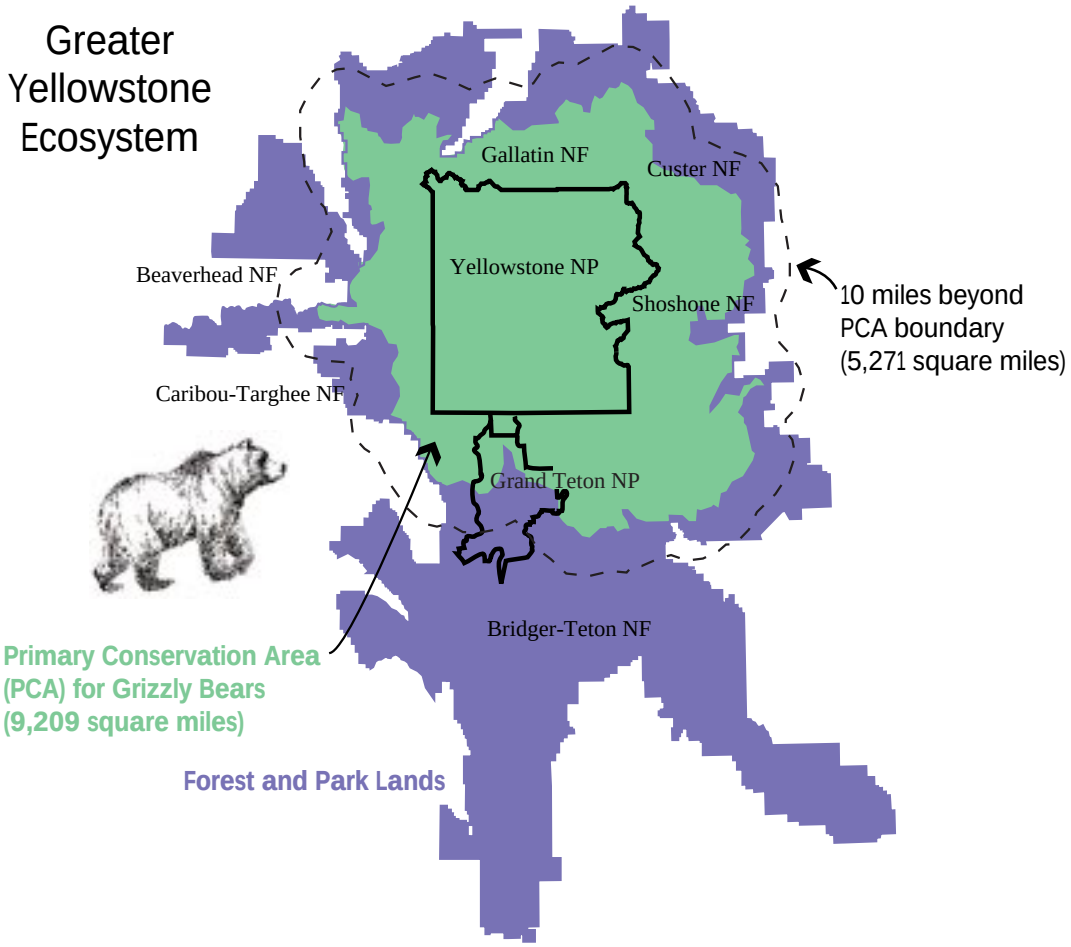
1. To have an average of 15 adult females with cubs of the year on a 6-year running average inside the recovery zone and within a 10-mile area surrounding the recovery zone.
2. To have 16 of 18 recovery zone Bear Management Areas occupied by females with young from a running 6-year sum of observations; no two adjacent areas shall be unoccupied.
3. The known human-caused mortality shall not exceed 4 percent of the population estimate based on the most recent three-year sum of females with cubs minus known, adult female deaths. In addition, no more than 30 percent of the known human-caused mortality shall be females. These mortality limits cannot be exceeded during any two consecutive years.

Currently the recovery goals are being met. Hunter-caused mortality has increased consistently over the past several years. YES has convened a working group to explore ways to reduce mortality.

Management of grizzly bears in the Yellowstone area uses the best currently available methods to assure a healthy population of grizzly bears—close monitoring of the population and habitat, and responding when necessary with management actions when human conflicts occur. This includes an ongoing program to inform the public how to live, work, and recreate in bear country, such as through proper food storage and management of bird feeders in bear country, when and how to use pepper spray instead of firearms, how to avoid human-bear conflicts, and management of road densities and other methods of access to minimize impacts to grizzlies and their habitat.

The Yellowstone population of grizzlies is getting close to recovery. There are still several steps that must be accomplished under the *Grizzly Bear Recovery Plan*, before the U.S. Fish and Wildlife Service would consider proposing "delisting" for the Yellowstone population. One of the most important steps is finalizing the interagency Conservation Strategy, which is a comprehensive plan for how the states and federal agencies in grizzly country will monitor and manage this population after delisting. The purpose of

Grizzly bear.



The Primary Conservation Area above is used in the draft *Conservation Strategy for the Grizzly Bears in the Yellowstone Ecosystem*, the interagency plan for managing and monitoring a recovered population of grizzlies in the Yellowstone area.

this Conservation Strategy is to:

1. Describe and summarize the coordinated efforts to manage the grizzly bear population and its habitat, and the public education/involvement efforts that will be applied to ensure continued conservation of the grizzly bear in the GYA; and
2. Document the regulatory mechanisms that exist to maintain the Yellowstone population as recovered through the legal authorities, policy, guidelines, management programs, monitoring programs, and the commitment of participating agencies.

Public comment on the draft Conservation Strategy has occurred. Public comments will be incorporated into the final Conservation Strategy, anticipated late in 2001 or early in 2002.

There are several other actions that must be taken by the states and federal land and wildlife management agencies before Recovery Plan implementation can be considered completed. For example adequate regulatory mechanisms must be in place to sustain a recovered population. The Service will not consider proposing delisting until these mechanisms, required by the delisting criteria of the Endangered Species Act (ESA), are in place.

For example, agencies may have to make changes to their management plans to correspond with the final habitat-based criteria, which will be both appended to the Recovery Plan and incorporated into the final Conservation Strategy. Also, the Recovery Plan calls for states to legally control non-regulated shooting of grizzlies, in order to sustain recovered populations.

Whenever the Service publishes a delisting proposal, public comments are accepted and considered; it is usually about a one-year process from a proposal to the final decision about whether or not to delist a species.

For additional information, go to:
http://www.r6.fws.gov/endspp/grizzly/
http://www.fs.fed.us/wildlife/igbc/
http://www.nrmsc.usgs.gov/research/igbst-home.htm

Whitebark Pine: Holding on in the High Country

In the Greater Yellowstone Area (GYA), whitebark pine (*Pinus albicaulis*) grows on high-elevation slopes and ridges in what is known as the subalpine zone. Whitebark pine depends upon disturbances such as fire to create conditions favorable for establishment of new seedlings. It also depends upon a large jay known as the Clark's nutcracker to spread and plant whitebark pine seeds. Over the course of a year, the nutcracker caches or buries thousands of seeds. With an excellent memory, the jay recovers most but not all of the seeds. Some of the undiscovered seeds germinate providing for a new generation of trees.

Whitebark pine is important because the nuts from the pine cones are one of the four primary food sources for GYA grizzly bears. From year to year, the grizzlies' individual food sources vary, but they depend heavily on whitebark pine nuts, army cutworm moths, cutthroat trout, and winterkilled ungulates. Whitebark pine is important because unlike some of the other food sources, it is distributed throughout the ecosystem, and it is a fall food source that is high in fat, which allows the bears to put on weight right before hibernation. In the absence of fire or other disturbances, some whitebark pine stands can be overtaken by more shade tolerant species such as alpine fir and Engelmann spruce, resulting in declining cone production.

Whitebark pine.

Whitebark pine is also threatened by an exotic disease known as white pine blister rust. Imported from Europe in 1910, the rust has decimated stands of white pine, limber pine, and whitebark pine. Blister rust has not harmed the whitebark pine in the GYA to the same extent it has farther west. In Glacier National Park, blister rust has effectively rendered whitebark pine "biologically extinct," as the trees are no longer able to produce cones. In the GYA, preliminary field research shows the infection rate is between 10 and 12 percent.

The weather in the GYA plays a big role in slowing down the rate of infestation. The fungus is transmitted to the trees during periods of high relative humidity, which is much more common in a maritime climate rather than in the continental climate found in the GYA.

There are several strategies to restore and maintain whitebark pine populations in the path of the blister rust and forest succession. Where whitebark stands are being overtaken by spruce and fir, whitebark pine can be favored by removing the spruce and fir with fire or other means. Prescribed fire adjacent to existing whitebark stands may create conditions favorable for whitebark regeneration. Researchers already know that some whitebark pine trees—perhaps one in 1,000—are resistant to the disease. If managers can identify healthy trees in a stand where everything around them is infected, foresters can collect seeds from cones for growing resistant seedlings in nurseries. Geneticists are working on tissue cloning and branch rooting to help find ways to inoculate the trees and hopefully come up with a solution to the blister rust infestation.

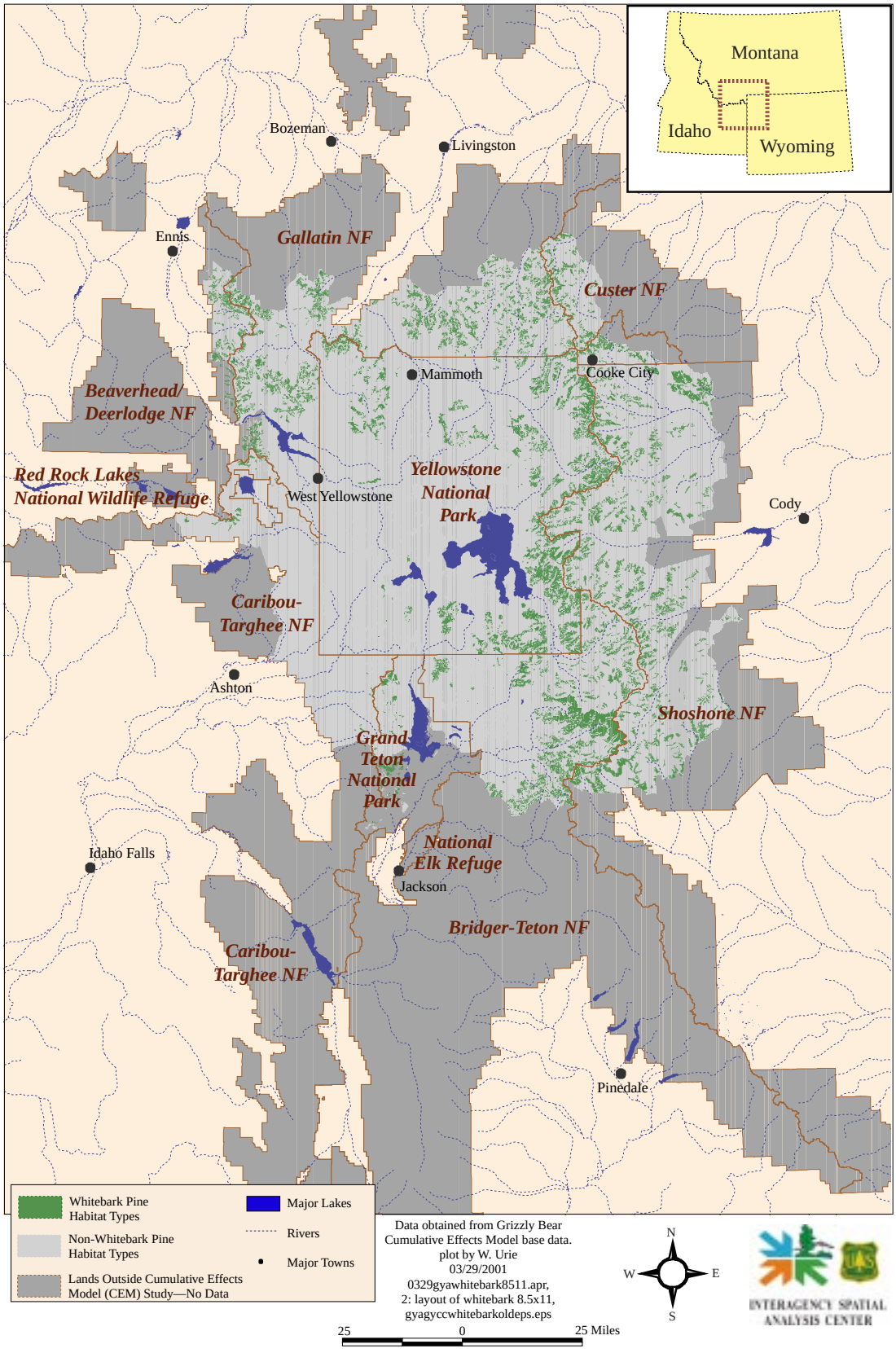
Foresters are gathering seeds and growing seedlings at two Forest Service nurseries. In 1999, crews were able to gather about 133 pounds of seeds—an estimated 500,000 seeds—to be used in reforestation work. In fiscal year 2000, the GYCC helped fund whitebark pine planting projects on the Caribou-Targhee, Gallatin, and Shoshone National Forests.

Inventory and monitoring whitebark pine, given its widespread distribution and remote, high elevation locations, can be an expensive and difficult task. Yet there is a critical need to understand what is happening to this vital component of the ecosystem. The GYCC funded a project with Yellowstone Ecosystems Studies to test hyperspectral remote sensing of whitebark pine to see if the new technology can be used to gauge the health of select stands in different areas around the GYA. The blister rust that infects the trees first kills the upper crown. Special cameras can detect the diseased portion and tell researchers which stands show some signs of infection, and how badly individual trees are infected.

The Whitebark Pine Cooperative will continue to work on conservation of this critical species in the GYA. Areas of cooperative work include identification of disease resistant trees, cultivation of resistant seedlings at nurseries, coordinated inventory and monitoring, development of management guidelines, implementation of stand treatments and prescribed burns, and identification of research priorities.

For additional information to www.whitebarkfound.org.

Greater Yellowstone Area: Whitebark Pine Distribution within the Grizzly Recovery Area



Greater Yellowstone Coordinating Committee Briefing Guide

Federal Land Managers in the Greater Yellowstone Area